UNIVERSITY OF ALBERTA

THE IMPACT OF DISTANCE EDUCATION ON THE ORGANIZATION OF SCHOOLS AND SCHOOL SYSTEMS IN ALBERTA

BY

PETER HOUGH ©

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The undersigned certify that they have read, and recommend to the the Faculty of Graduate Studies and Research for acceptance, a thesis entitled THE IMPACT OF DISTANCE EDUCATION ON THE ORGANIZATION OF SCHOOLS AND SCHOOL SYSTEMS IN ALBERTA submitted by PETER BRIAN HOUGH in partial fulfilment of the requirements for the degree of DOCTOR OF PHILOSOPHY.

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Dedicated to Sherie, Matthew, Petrina, and Kimberley.
Without their encouragement, understanding, and sacrifice
this venture would not have been possible.

ABSTRACT

The objectives of this study were to describe organizational and administrative arrangements implemented by Alberta schools and school systems to meet the needs of senior students in small schools, and to identify critical issues associated with these arrangements.

Five cases involving three distance education consortia formed by collaborating jurisdictions, and two autonomous jurisdictions which managed their own distance education programs were examined. Data were derived from interviews, casual observations, and extant documents.

Each case study provided an unique model of decision-making and cooperation. One consortium depended on cooperative decision-making and central office administration. In the second consortium decisions were made by an executive committee of senior administrators, and in the third consortium decisions were made by the consortium coordinator. While one of the autonomous jurisdictions had centralized their operation, the other autonomous jurisdiction had decentralized their delivery and administration of distance education. Organization and administration issues included the number of levels of decision-making, arrangements for tutor-markers, and course fees and other budgetary arrangements.

The schools surveyed were amalgams of four models of distance education, and while teachers were supportive they preferred classroom instruction. Although no teachers had become redundant because of distance education, teachers expressed their concern about the possible loss of employment. A critical role for teachers was that of the in-school coordinator who provided support and encouragement to students and monitored their progress. Principals were found to be crucial to the acceptance of distance education and change in small schools. Five major issues were identified as being critical to the success and survival of distance education in schools: Organizational cooperation, leadership, concepts of learning, student supervision, and the employment conditions of tutor-markers and other personnel involved with distance education.

The findings were discussed with respect to the implications for students, school personnel, schools and school systems. Overall senior students in small schools had more equitable learning opportunities. Teachers and principals were reshaping schools to provide for independent learning opportunities, and technologies such as fax and computers were accepted in schools. Consortia were developing various working arrangements which suited their particular contexts.

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Chapter 1

OVERVIEW AND OBJECTIVES OF THE STUDY

Introduction

The integration of distance education and communication technologies offers promising educational possibilities, but may also pose a challenge to the organizational structure of traditional education. In the past, correspondence education was seen as a poor alternative to traditional classroom instruction, partly because of the slowness of the correspondence process and partly because of the lack of interaction between the student and teacher. Increasing the interaction and reducing the communication "turnaround" from weeks to a matter of minutes is a significant technological achievement, which in turn has had a significant effect on the success of distance education students. Such developments have stimulated interest in distance education and encouraged educators and policymakers to explore and develop non-traditional modes and media for large scale educational use in schools. According to Sweet (1989), "within the last decade governments and institutions around the world have embraced the concept of distance education. A remarkable array of courses and programs have been designed, developed and, depending on location, delivered by various means" (p. 3).

In 1985 the Alberta Government announced a new Secondary Educational Policy, which stated that "the secondary education system must use technology to enhance learning and to facilitate access to equitable educational opportunities for all students, regardless of ability, circumstance or location" (p. 8). In response to this mandate, Alberta Education explored the use of distance education and technology to improve "access" and "equity" for high school students in small schools.

This Alberta initiative has progressed from a small pilot project in 1987 to the establishment of distance education in a large number of small schools. During the past four years these schools and their jurisdictions throughout Alberta have made various organizational arrangements to facilitate and adapt distance education. New organizational structures have developed and existing organizations have changed. Five consortia of rural jurisdictions have been formed, and within some jurisdictions existing organizational structures have been adapted.

Objectives

This research is a series of five case studies of the organizational arrangements which schools and school systems have implemented to meet their needs in the provision of distance education. The objectives of the study were to investigate and describe a broad range of organizational arrangements and to identify critical issues associated with these arrangements. Three distance education consortia and two autonomous jurisdictions were selected for the case studies, and the following questions guided the research:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

2. What are the critical issues concerned with these organizational arrangements?

Significance

Current interest in distance education throughout the English-speaking world is obvious from the rapidly expanding ERIC data base on the subject. However, much of this literature is either speculative or focused at the post-secondary level. Limited numbers of empirical studies examine the use of distance education in schools from either a pedagogical or an organizational perspective. This is understandable given that the extensive use of distance education in schools is relatively new. This study, with a focus on organization and administration, complements the work of other researchers investigating the implementation of distance education in schools.

The recently published formative evaluations of the distance education pilot projects in Alberta (Clark & Schiemann, 1990; Clark & Haughey, 1990) have made a valuable contribution to this area of study. These formative evaluations examined the organizational and educational outcomes and changes, and expressed optimism about the future of distance education in schools, its cost effectiveness, and its pedagogical efficiency. While these evaluations provide a foundation on which to build further research, significant changes have occurred since these studies were conducted. The pilot projects, as such, have ended. Alberta Education has continued to provide encouragement and financial support with the Distance Education Equity Grant to small schools throughout Alberta. While distance education has had significant effects on the organization within schools, cooperative efforts within autonomous jurisdictions have required the adaptation of existing organizational structures and collaboration among jurisdictions has resulted in the formation of consortia.

The significance of this study is grounded in the need to explore and extend knowledge about this initiative and its organizational impact, and to contribute to current and future decisions about the implementation and management of distance education. These current developments in Alberta provide a unique opportunity to record the formation of new organizational arrangements in schools and school systems involved with distance education.

Delimitations

This study was bounded by its major questions and central theme, a particular time, the research methodology, and the context. The major questions concerned the organizational impact of distance education on schools and school systems, in selected schools and jurisdictions within Alberta.

Collection of data occurred during the early part of the 1990-91 school year, and the descriptions and discussion which follow record the organizational phenomena of that time. Data from interviews, observations, and documents were collected primarily during October and November, 1990, although more information and clarification of details were sought through telephone conversations during the 1990-91 school year.

This study was also delimited by its case study methodology and context. Generalizations can be made about this study only to the extent that other jurisdictions and their distance education contexts are similar.

Limitations

This study was limited by using participants as the major source of data, and by having the researcher as the only interviewer, collector, and analyzer of the data.

The credibility of this and other naturalistic inquiries depends to a large extent on the truthfulness of participants, their ability to remember and describe their experiences accurately, their willingness to be interviewed, and their willingness to divulge particular information.

Because the researcher was the sole interviewer, the research was limited by his ability to set and sustain an appropriate climate for the interviews, to set participants at ease, to ask appropriate initial probing questions, and to understand a participant's meaning. While the researcher's interviewing expertise improved during the process of conducting 53 interviews, often there was no way to overcome the inhibitions, and in some cases the suspicions, of respondents.

While the amount and quality of data collected within a reasonable amount of time depended on the researcher's interviewing and observation skills, the pressure on participants to return to their regular work was apparent in most cases.

Because the interpretation of data was restricted to a single researcher, unconscious bias may have been present. While the researcher's positive attitude to distance education is reflected throughout this dissertation, there has been no conscious attempt to exclude negative responses during the analysis of data. However, most of the respondents were voluntarily involved with distance education, and probably were biased in favor of distance education.

Assumptions

Several assumptions were made in the conduct of this study. The major assumptions concerned the significance of the study, the collection of information, and the suitability of the research method.

It was assumed that a study of the participants' understandings of the organizational impact of distance education would contribute to the development of distance education technology in Alberta, and that this study may also have implications with respect to the implementation of other educational innovations.

It was assumed that information would be made available to the researcher, and that superintendents, principals, and teachers would participate; permission would be granted to observe relevant organizational phenomena, and supporting documents would be made available.

Due to the exploratory nature of this study, a qualitative orientation and a series of case studies using interviews, observations, and document analysis were assumed to be the most effective methods of researching the organizational phenomena concerned.

Definition of Terms

Although a large number of terms are used and explained throughout this dissertation, two significant and central terms which require definition are listed as follows:

Distance Education: According to Alberta Education (1990a),

> Distance education is defined as the use of any appropriate means to eliminate distance between student and teacher in order to provide courses not otherwise available from a teacher locally by traditional delivery methods due to a) insufficient student numbers in these courses or b) absence of an on-site specialist to deliver these courses. (p. 1)

This implies that communication between the teacher and the student does not need to be face-to-face. The teaching role of monitoring progress, instructing and tutoring, and evaluating may be shared by a number of individuals, only one of whom may be on-site.

Consortium: The term consortium is defined in Webster's dictionary as a coalition or association. Konrad and Small (1989) defined a consortium in terms of collaboration:

> The highest level of collaboration lies in the creation of a formal partnership, the archetype of which is a consortium wherein two or more institutions agree to establish a new mechanism to undertake, on their behalf, programs and projects of mutual interest. (p. 200)

The term consortium implies the association and collaboration of two or more institutions, and in this study will be used to refer to a collaboration of jurisdictions.

Background

Alberta Education began pilot studies of distance education programs in small rural schools at the beginning of the 1987-88 school year. According to the Alberta Government (1985), the purpose of these experimental programs was to overcome the curriculum deficiencies of small schools and provide high school students with "access to equitable educational opportunities" (p. 8). The deficiencies and difficulties experienced by small schools were identified by Alberta Education (1988a) as follows:

> The basic problem facing small schools in the province is one of maintaining a range of program offerings in a cost-effective manner. With many small schools operating with fewer than 100 students distributed over three grades [grades 10, 11, and 12], a typical classroom might consist of one teacher instructing very few pupils. Clearly, the costs associated with traditional instruction in this context (i.e., a classroom with one teacher and a few students) are prohibitive. An additional problem that small schools face is locating qualified staff for the range of program offerings desired. The challenge is to find a way of providing an equitable educational program for students in small schools in a cost-effective manner. (p. 2)

The pilot programs sought to produce a "cost-effective" and "an equitable educational program" for small schools through the use of distance education and telecommunication technology. It was also suggested, at the time the pilot programs began in small schools, that distance education technology could eventually be used more widely in schools, and that the pilot programs may be the first glimpse of an education and technology model of the future. An Alberta Education (1987a) discussion paper, Visions 2000, argued that technology would play a more significant part in the education of children in the future:

> Research has led us to a vision of a future where individual needs of each student can be met by our educational system in new and powerful ways. Study after study indicates the importance of an intelligent application of technology to the provision of learning opportunities for children. (p. 4)

In 1987 these changes began to take shape when 13 schools in 10 jurisdictions in the southeast of Alberta participated in the initial phase of the "Distance Learning in Small Schools Project." Each of the 10 jurisdictions provided an "off-site" specialist teacher, who became known as a tutor-marker. The tutor-markers were either equipped with the necessary technology or given access to the technology, such as facsimile (fax) machines, at a nearby school, and usually worked at home. Each of the local tutor-markers was responsible for tutoring and marking the Alberta Correspondence School materials in at least one subject throughout the 10 jurisdictions. One staff member in each school was appointed as a distance education coordinator, and schools were equipped with fax machines. Teleconferencing equipment was supplied toward the end of the first year of the pilot study, and in the second year personal computers were supplied to each school and to the tutor/markers to facilitate faster communication (Provincial Advisory Committee On Distance Education, 1989).

The second pilot project "Distance Learning Project North," began in September 1988 and provided access to distance learning in 26 small schools in the north east of Alberta. The project concentrated on the delivery of a variety of high school subjects for grades 10, 11 and 12. The main focus of this project was the development of modular materials in high school mathematics courses which employed a computerized test-bank and Computer Managed Learning (CML). A wide range of subjects using Alberta Correspondence School materials were delivered to each school. Each pilot school adapted an existing classroom as a multi-functional "learning centre" where students could contact tutor/markers using FAX machines, telephones or computers. Each centre was equipped with a Digital Microvax microcomputer and a computer-managed learning (CML) system, which had not been used in the southern project (Alberta Education, 1988b).

In 1985 Alberta Education stated that the Provincial Government's initial objectives were "to enhance learning and to facilitate access to equitable educational opportunities" through the use of technology (p. 8). Five years later Alberta Education (1990) claimed that the quality and quantity of courses available to students in small rural schools had improved to a satisfactory level with the establishment of distance education. In 1989, at the end of the first year of the northern project and the completion of the second year of the southern project, these pilot studies were declared a success. According to Alberta Education (1990a),

> Early indicators showed that distance education was cost-effective, and that student results were competitive with those from traditional instruction. . . . By September 1989, distance education was no longer on a project basis. It had become part of the way rural high school students receive their education in Alberta. (p. 2)

Recently published independent evaluations have expressed optimism about the future of distance education in Alberta schools, and acknowledged its cost effectiveness and its pedagogical efficiency (Clark & Schiemann, 1990; Clark & Haughey, 1990). As well as increasing the number of courses offered, the completion rate for distance education students participating in the pilot schools improved considerably. According to Alberta Education (1990a), previously, only 30% of senior students completed the traditional correspondence courses. With the new distance education arrangements the completion rate had increased to 90%.

About 2000 senior students in 139 schools throughout Alberta are now using distance education courses to complement their high school programs. This initial success and acceptance by rural school communities appears to justify the expenditure and effort put into developing distance education and new technology in Alberta.

Alberta Education has continued to express faith in the future of distance education with substantial financial support for the development and application of distance education materials and technology in its schools. In 1989 the government made further funds available through a Distance Education Equity Grant to all eligible jurisdictions for the implementation of distance education in small schools. Alberta Education (1989) summarized the purpose of the grant in the following statement:

> To provide qualifying school jurisdictions with funding to enable low enrolment senior high schools to offer a wider range of student courses than under present circumstances. The grant will support the acquisition of Distance Education programs, instructional services, technologies and coordination services at the school, school jurisdiction and consortia levels. (p. 2.2)

In a recent Canadian survey of distance education the concluding comments reflect the essence of the Alberta initiative and express optimism about its future. Haughey (1990) wrote:

> To see distance education as appropriate only for alleviating the problems of declining rural enrolments would be short-sighted. Given the pace of development of alternative technologies and their interactive capabilities to engage students and encourage student learners, we cannot ignore their potential value for education. . . . In the long view, such approaches may be the cutting edge of the transformation of schooling from the industrial model of the 19th century to a post-industrial model more appropriate for the 21st century. (p. 7)

Organization of the Thesis

The thesis is organized into 10 chapters. The first two chapters discuss the research design and research methodology for the study. The third chapter is an analysis of the topic according to the related literature. The fourth chapter provides more details and background about distance education and the high school curriculum in Alberta. Chapters five, six, and seven are each concerned with one of the consortium case studies. The eighth chapter contains two case studies of autonomous jurisdictions. Chapter nine provides an overview of the study, and a summary of the findings concerned with jurisdictional arrangements, school arrangements, and critical issues. The final chapter provides an analysis of the implications of the distance education arrangements for students, school personnel, schools, and school systems, and concludes with suggestions for further research.

Chapter 2

METHODOLOGY

Introduction

This study began with the assumption that the impact of distance education on Alberta schools and school systems has provided an interesting matrix of problems and solutions and has challenged and changed traditional schooling in small schools. To describe and understand such change phenomena, Fullan (1982) suggested that they should be addressed from the point of view of key individuals such as superintendents, principals, and teachers. Fullan stressed that "individual meaning is the central issue" in a process of change, and that "the connection between change in practice and outcomes, and the underlying logic of change" may not always be apparent to an observer (p. 295). It is a matter of going beyond the superficial structure and outcomes and identifying the changes and issues according to the participants, and describing what it means to them.

This qualitative research was also based on the assumption that there are multiple realities, and sought understanding of those realities from significant participants familiar with the particular educational and organizational context.

Case Study Approach

The proposed research involved five naturalistic case studies: Naturalistic in the sense that the field research was conducted in the actual organizational settings. Data were derived from natural, verbal responses to questions, observation of the actual organizational phenomena associated with distance education, and extant documents. Guba and Lincoln (1981) suggested that naturalistic research should have the following qualitative characteristics:

> Natural settings, humans as primary data-gathering instruments, use of tacit knowledge, qualitative methods, purposive sampling, inductive data analysis, grounded theory, emergent design, negotiated outcomes, case-study reporting mode, idiographic interpretation, tentative application of findings, focus-determined boundaries, and special criteria for trustworthiness. (pp. 39-43)

Merriam (1988) defined a naturalistic research design by its "special features," which were listed as "particularistic, descriptive, heuristic and inductive," and are explained as follows:

> *Particularistic* means that the case study focuses on a particular situation, event, program or phenomenon. The case itself is important for what it reveals about the phenomenon and for what it might represent.
>
> *Descriptive* means that the end product of a case study is a rich "thick" description of the phenomenon under study. *Thick description* is a term from anthropology and means the complete, literal description of the incident or entity being investigated.
>
> *Heuristic* means that case studies illuminate the reader's understanding of the phenomenon under study. They can bring about the discovery of new meaning, extend the reader's experience, or confirm what is already known.
>
> *Inductive* means that, for the most part, case studies rely on inductive reasoning. Generalizations, concepts, or hypotheses emerge from an examination of the data - data grounded in the context itself. (pp. 11-13)

As Merriam (1988) and Wiersma (1986) implied, the primary concerns of a qualitative naturalistic case study are with description and interpretation rather than with measurement and prediction. However, the type of "data collected are not necessarily limited to those obtained through participant observation. Interviewing may be used, and supportive quantitative data may be brought to bear from internal or external sources," such as information from questionnaires and document analysis (Wiersma, 1986, p. 244). Merriam (1988) suggested that the major strength of case study research is the opportunity to use "multiple methods of data collection" (p. 69).

In order to document the variety of organizational forms and their differing arrangements for the provision of distance education, the most appropriate methodology is a series of case studies. Only the case study will allow for the gathering of specific data unique to each situation and provide sufficient information to describe the contextual factors which have influenced how distance education has been understood.

Aspects of Rigor

Aspects of rigor in naturalistic research concern trustworthiness. Guba and Lincoln (1981) identified four aspects of trustworthiness; credibility, transferability, dependability, and confirmability.

Credibility

Guba and Lincoln (1981) defined *credibility* as the "degree of isomorphism between the study data and the phenomena to which they relate" (pp. 104-105). They advised that care must be taken in gathering and recording data, and that continual scrutiny is necessary to eliminate distortions and enable the researcher to produce a truthful and credible report. In this study the researcher had sole responsibility for collecting and analyzing the data, and as such, "the researcher's primary responsibilities are to experience and describe [as accurately as possible] what is going on in the program" (Patton, 1980, p. 163).

Most of the distortions were overcome by cross-checking data from interviews, observations and documentary material, and continual assessment of credibility. Merriam (1988) provided four strategies to ensure credibility; triangulation, member checks, peer examination, and stating the researcher's biases (p. 169).

Triangulation was used to ensure credibility, that is, multiple sources of data from interviews, observations and documents were cross-checked and compared to verify the credibility of findings.

Member checks was another strategy recommended by Guba and Lincoln (1985) to check the credibility of data and findings. They suggested that member checks should be both formal and informal and should occur continuously during a naturalistic study. Merriam (1988) explained that the member check process requires data be taken "back to the people from whom they were derived and asking them if the results are plausible" (p. 169).

Peer examination, or peer debriefing as described by Guba and Lincoln (1985) is "a process of exposing oneself to a disinterested peer in a manner paralleling an analytic session and for the purpose of exploring aspects of the inquiry that might otherwise remain only implicit within the inquirer's mind" (p. 308). In this study the researcher shared aspects of the inquiry with his supervisory committee, and other colleagues in order to clarify and justify findings.

Being aware of the researcher's own biases is another aspect in the establishment of credibility. The researcher's preconceptions and presence at the research setting should be thoroughly challenged by the data collected. Patton (1980) suggested that the observer should approach fieldwork "with a disciplined intention not to impose preconceptions and early judgements on the phenomena being observed" (p. 163). The researcher must also be aware that respondents may attempt to introduce distortions out of a desire to be "helpful" or as a result of their own biases or misconceptions. The researcher should develop a level of rapport with the subjects, but must be careful not to become too involved.

Transferability

In a naturalistic study Guba and Lincoln (1981) suggested that the idea of generalizability should be replaced by the idea of *transferability*. Generalization implies that data are context free, whereas transferability is meant to imply context (pp. 118-119). The proposed study will have limited generalizability. It is limited to a particular context, which will be described in terms of particular subject matter in a particular educational environment. However, the researcher has endeavored to provide sufficient descriptive data so that readers can compare or relate this study to similar subject matter and environments. This aspect was checked, by seeking the opinions of a research colleague unfamiliar with the topic. Both the topic and its description were reported to be readable, its content easily understood, and the findings consistent with other areas of human endeavor.

Dependability

Instead of consistency or reliability Guba and Lincoln (1985) suggested that the concept of dependability should be used for naturalistic inquiry methods. With respect to the concept of dependability in an earlier discussion, Guba and Lincoln (1981) stated, "it is essential that documentation of the decision trail (that is, the audit trail) be adequately maintained. . . . A second judge should be able to verify that categories derived by the first judge make sense in view of the data pool from which the first judge worked" (p. 122). The dependability of the researcher's interpretation involved the verification of transcripts by each respondent, and the verification of each case study by one or more of the key participants.

Confirmability

The burden of proof in a naturalistic study is shifted from the investigator to the information itself. This requires that the researcher "reports his data in such a way that it can be confirmed from other sources if necessary" (Guba & Lincoln, 1981, p. 126). The case study descriptions in this research are based on the direct quotations or paraphrasing of respondents comments, and supported by documentation and observation where possible. The report of the data may be confirmed by inspecting the catalogued transcripts and documents.

Selection of Case Studies

Various senior educators throughout Alberta provided information about consortia and jurisdictions involved with cooperative distance education operations. The information provided by these educators influenced the selection of the five case study sites. The three consortia and two autonomous jurisdictions chosen for the research were assessed to have potential with respect to the objectives of this study because of their different histories, different organizational arrangements, and the extent of their involvement with a variety of distance education models. The case study sites were also accessible to the researcher, being reasonably close to Edmonton and each other, in areas which surround Wainwright, Stettler, Red Deer, Camrose, and Leduc.

CEDEC

The Central East Distance Education Consortium (CEDEC) includes six jurisdictions and Lakeland College, and coordinates distance education in 17 schools within an area which surrounds Wainwright. It is the second largest distance education consortium in Alberta, and was one of the first cooperative efforts to evolve outside the initial pilot projects. At the time of the research, this consortium was just beginning its second year, and according to several respondents the first implementation year had been extremely difficult with a number of organizational and financial problems.

Big Sky

The Big Sky Consortium is the largest collaborative organization of its type in Alberta, and coordinates distance education in 22 schools from 10 jurisdictions in a very large area which includes the south-west part of Alberta, from Stettler south to the Montana border, and east from Calgary to Saskatchewan border. Apart from being the largest consortium of its type, it could also be considered the first and evolved from the initial distance education pilot project.

West Central

The West Central Distance Education Consortium around Red Deer coordinates distance education in 13 schools in nine jurisdictions, and, like CEDEC, its schools were not involved with the pilot projects, and, at the time of this research it was also beginning its second year. This consortium was of particular interest because it had developed an effective and innovative organization with significantly different organizational characteristics to the previous two consortia.

Camrose

The County of Camrose coordinates distance education in six schools within its own jurisdiction, and had just included the Alberta School of the Deaf as another of its distance education schools at the time of the research. In its second year, this cooperative effort was smaller than the previous consortia mentioned. None of the Camrose distance education schools were involved in the original pilot projects, and only five of the six participating schools were receiving provincial grants. Tutor-markers were appointed in each of the jurisdiction's six schools and serviced the distance education needs of the high school students in one subject in their own school as well as the other cooperating schools.

Leduc

At the time of the research the County of Leduc was just starting distance education in five schools within their own jurisdiction after an initial year of planning. Facilities had been provided in their central office for a number of tutor-markers to provide a centralized distance education service to their high schools. They had just installed an extensive Macintosh computer network which the county hoped would be used to provide CML based courses.

Data Collection

Data in the five case studies were collected from three sources--interviews, observations, and documents. The responsible authorities were fully informed of the study and permission was sought to conduct this research in each jurisdiction. (See Appendix A.) In each case study information was sought about the arrangements, issues and implications of distance education at the consortium and school levels. Most of the information was obtained through interviews with superintendents or central office administrators, school administrators, teachers, and teachers' aides involved with distance education using a semi-structured interview protocol. (See Appendix B.) While the interview data were supported by some documentation, because distance education was a recent innovation, documented policy and procedure often lagged behind what was stated and observed to be happening in practice.

Although the researcher initially proposed to interview a set number of superintendents or central office administrators, principals, and teachers in each consortium and school, this strategy was found to be unrealistic. Key participants came from a variety of designated positions. For example, in one school the distance education coordinator might be a teacher's aide, while in another school the principal was the coordinator and the appropriate person to interview.

At least one central office administrator, who was knowledgeable about distance education, was interviewed in each jurisdiction. Where possible the distance education coordinator, the principal, or the assistant principal in each school was interviewed. In each consortium, the researcher visited about five jurisdictions and 10 schools, and interviewed at least one person in each organization. That is, about 15 participants from each of the three consortia were interviewed. In one of the two autonomous jurisdictions the deputy superintendent and two principals were interviewed, and in the remaining jurisdiction, the county's technology coordinator, a principal, and the distance education teacher were interviewed.

All formal interviews were audio-taped and transcribed. All informants were asked to verify the transcription of their interviews, and where necessary to enlarge, or to amend the content. The researcher also attended two meetings, gathered observational data, and obtained appropriate documentation.

Ethical Guidelines

The researcher followed the ethical guidelines established by the 1988 University of Alberta General Faculties Council and the Research Ethics Review Policies and Procedures of the Department of Educational Administration. The responsible authorities were fully informed of the study and permission was sought to conduct the research in each jurisdiction. All potential participants were invited to take part on a voluntary basis and were informed that they had the right to withdraw from the study at any time. Confidentiality and anonymity were assured.

Chapter Summary

The research consisted of a series of five naturalistic case studies of the distance education arrangements in schools and school systems. The researcher sought to investigate and describe the arrangements, identify associated issues, and examine the implications of these arrangements. Three consortia and two jurisdictions, with different arrangements and histories, were selected for the case studies. Interviews of superintendents and central office administrators, principals, and teachers provided the primary source of data. Information supplied in interviews was supported by observations and appropriate documentation, and provided a unique series of descriptive case studies of the organizational impact of distance education on schools and school systems in Alberta.

Chapter 3

RELATED LITERATURE

Introduction

While Wedemeyer (1981) predicted that societal changes and deployment of communication technology would force educators and policymakers to consider new, non-traditional, modes of teaching and learning, Papert (1980) argued that new technology could significantly change the present organizational structure of schools and school systems. However, Fasano (1986) identified several studies which concluded that there are conceptual as well as organizational difficulties inherent in the "quantum leap" forced on schools by new technologies. Robert (1982) observed that "the main obstacle . . . is institutional resistance on the part of the school to any organizational change tending to displace the teacher's lecturing as the source of knowledge" (p. 78). He went on to say, "it is not just the habits that have to be changed, but the whole organization of work, time and premises that has to be rethought" (p. 78).

In the recent Alberta School Act the term school has been redefined as "a structured learning environment through which an education program is offered to a student" (Province of Alberta, 1988, p. 8). Previously such a definition was constrained by the physical dimensions and characteristics of a particular place, or building. Alberta Education's (1985) rationale for change was that

> A broader definition of school would allow learning to occur in the traditional form of school, at a distance, at home, in the workplace, or outside any formal school structure. The more flexible definition would permit the integration of the school and the community and the incorporation of advances in technology to provide fair and equitable access to educational opportunities to all students, regardless of location. (p. 11)

This broader concept of school has implications for students, who may wish to learn in different ways, times and places through the implementation of distance education and a variety of information and communication technology. Several writers (Alberta

Education, 1987a; Fasano, 1986; Melmed & Burnham, 1988; Stephenson, 1984; & Wedemeyer, 1981) expressed the view that the development of non-traditional modes and media for large scale educational use gives us the opportunity to move beyond the "Platonic" model of face-to-face teaching and learning. Such changes will also have significant implications for teaching and for teachers whose training and experience are embedded in traditional methods.

Fasano (1986) cautioned that even at this early stage of development and exploration, educators should be aware "of the powerful impact technology can have on systems and organizations" (p. 5). She continued,

> Such power creates a dilemma for the institution of education. This is a system of service delivery organized on a specific formula--phrased in terms of location and organization in time and space, teaching/learning methodologies, ratios of adults to children, manpower profiles and the like--which has survived practically unchanged for much longer than many other service systems. There is every reason to believe that information technology, if and when introduced efficiently and effectively in education, would alter it in ways comparable to what has happened elsewhere, and would make possible alternative institutional models equally or even more cost-effective to deliver the same service. (p.105)

Fasano (1986) claimed that economic considerations would force educational institutions to share resources and "engage in this internal transformation," which will begin with institutions forming partnerships, and cooperating and coordinating with other parts of its own system (p. 105).

These remarks introduce several critical issues--the inevitability of technological innovation and structural change of educational institutions, institutional resistance to these changes, and the implications of these changes for students, teachers and school systems. This literature review will consider these and other issues with respect to distance modes and media. A description of distance education and associated technology will precede an account of their implications for teachers and teaching, learners and learning, the curriculum, schools, and school systems.

Distance Education and New Technology

Batey and Cowell (1986) described distance education as the "catch-all" phrase for anything from correspondence courses to interactive instruction by satellite. According to Markowitz (1988) "correspondence education" has been replaced by a relatively new term "distance education" which is generally accepted "as a synonym for independent study" (p. 89). To Sewart, Keegan, and Holmberg (1983), distance education denotes forms of study not usually led by a teacher in a classroom, but supported by an external tutor/marker and an external institution. Distance education may also be the terminology used for a program provided by an external agency and taught by a teacher, or tutor/marker, within a school. While distance education usually caters for individual study, it is possible to supplement this solitary activity with in-school tutorials, laboratory work, and other face to face interaction with resident school teachers and fellow students.

Whereas correspondence education implies exclusive association with the print media and delivery by mail, distance education relates to any form of delivery of a complete course of study via various media and communication technologies. Delivery options for distance education include four basic categories; print, audio, video and computer. Shobe (1986) commented that "in Canada and throughout the world, an overwhelming majority of distance education is still conducted by correspondence methods. Where audio, video or microelectronic technologies are used, they almost invariably complement or supplement core, print-based course materials" (p. 215). However, in a review of the literature and a survey of distance education in primary and secondary schools throughout the United States, Williams, Eiserman, and Quinn (1988) found extensive use of "alternative" technologies at the school level. They stated that,

> Although literature pertaining to distance education in higher education indicates that print is the predominant form of media used in distance education, this is not the case in lower level distance education. Rather a wide variety of technologies and combinations of technologies are being used; computers, audio-conferencing, slow-scan video conferencing, electronic blackboards, one-way and two-way radio, satellites, and one-way and two-way television. (p. 92).

Williams et al. (1988) predicted that as "home" VCR's and personal computers become more available they will have the greatest potential with respect to distance education. Recently, the Alberta Provincial Advisory Committee on Distance Education (1990) reported on the "sudden availability of inexpensive yet very capable laptop [computer] portables". The report predicted that these inexpensive laptop computers "may be the direction for schools in the immediate future" and that "teachers and students will have their own inexpensive modem equipped 'laptops' with which they can tie into the school's host computer" (p. 2).

Given that "communication is the core of distance education," Holmberg (1986) suggested that the attention being given to new or alternative communication technologies is understandable (p. 55). Haughey (1990) commented that distance education "is becoming more prevalent as learning resources involving alternative technologies are developed" (p. 6). Haughey identified the pervasiveness of technology as one of the major trends in a survey of school-level distance education throughout Canada, and stated that,

> There has been a pronounced increase in the use of technology for communication, including teletutorials, computer marking, fax, and electronic messaging. There is more involvement with audio, whether audioconferencing, either voice alone or computer-enhanced, or audio tapes; with video, both broadcast television and videocassettes; and with computer software for computer-assisted and computer managed learning. (p. 7)

According to several authors new technologies such as these are responsible for the current appeal and evolution of distance education (Eicher, 1984; Fasano, 1986; Holmberg, 1985). Wedemeyer (1981) offered an alternative view that distance education may be the catalyst for increasing the use of new communication technology in schools by providing "an appropriate place in education for technology" (p. 98).

Irrespective of the role of technology, Rios (1987) claimed that the increased utilization of distance education in rural schools is a response to new problems. Rios stated that "changes in demographic, economic, and social conditions" are threatening the survival of small rural communities and their schools (p. 1). While small rural schools are at the centre of these problems, they may also be part of the solution. The viability of small rural schools and possibly the community as a conscious educational and social choice may depend on strategies such as distance education, which according to Rios "is being given a good opportunity to prove its value" (p. 13). Hansen (1987) suggested that the capabilities of distance education are being used to make these small schools financially viable. Distance modes are enhancing instructional programs and providing equity by increasing the quantity and quality of educational opportunity, and providing access to high quality subject matter and subject matter experts.

Like many other writers, Batey and Cowell (1986) highlighted the aspects of "access" and "equity," but also suggested that distance education could provide opportunities for "interaction and joint activities with students in other schools. . . . [and] for promoting increased school/community linkages" (pp. 3-4). Alberta Education (1987a) suggested that distance education, used in conjunction with new communication and information technologies, could provide students with opportunities to learn;

> About Technology;
> To provide students with an understanding of the impact of technology on society in general and individuals in particular.
>
> In Technology;
> To provide the "hands on" and theoretical familiarity required for further study and effective use of technology.
>
> Through Technology;
> To make learning more efficient and effective by harnessing the instructional and information-processing capabilities of technology. (p. 24)

Other advantages of distance education may be less obvious, such as the opportunity to develop self discipline and confidence as an independent, and possibly, a lifelong learner. While some critics see independent learning and a lack of social interaction as a negative aspect of distance education, others see the solitary pursuit of learning, "even in cases where teaching is provided in classes or groups" as one of its advantages (Holmberg, 1985, p. 2). Holmberg suggests that through independent study, and by encouraging students to work on their own, students develop confidence in their independence and autonomy that may not always result from other forms of study. According to Sims (as quoted in Holmberg, 1985), "the essential objective in educating processes is learning by an individual learner . . . the methodologies or strategies employed are only incidental to this end" (p. 2).

Although distance education offers new opportunities to improve the quantity and quality of learning resources, and to expose students and teachers to new technology and strategies of learning and teaching, Morrison (1989) cautioned that the social implications of implementing this new technology within schools should also be considered. Morrison wrote,

> When discussing the impact or potential of distance education, then it is vital to recognize that we are dealing with a process and one which is inherently social as well as mechanical. Any decisions taken or plans proposed for the introduction of new technology to the educational process must be undertaken with the social context of technology clearly in mind. In fact, it can be argued that what is really needed today are not more machine technologies but more creative social technologies, which often provide the acceptance envelope of the machine technologies. This acceptance envelope, which defines the ways in which new technologies are diffused and implemented, also affects the type of impact they will exert, both positive and negative. In this regard, distance education systems themselves can be seen as both machine and social technologies. (p. 15)

In a report which compared the state of post-secondary independent study in 1968 and twenty years later in 1988, Markowitz (1988) commented that "financing, professional staffing, maintaining a favorable image, and becoming an integral part of the parent institution" are problems which still confront independent study programs today (p. 89). These problems are similar to those Morrison (1989) alluded to in his discussion above of the "acceptance" of distance education, or as it was stated earlier by Robert (1982) "the institutional resistance" to new technology. Wedemeyer (1981) commented that "education has been singularly reluctant to keep pace with the development of technology, and singularly resistant to the radical notion that conventional educational means are insufficient, perhaps even unable, to serve society's needs in the last decades of the twentieth century" (p. 97). Goodlad (1984) observed in a study of elementary and secondary schools, that teaching was virtually devoid of technological innovation, and schools generally failed to capitalize on the possibilities of new technology. While the world outside schools has witnessed a pervasive and "astonishing emergence of sophisticated, mobile and easily used communication devices," they are not being used to advantage in schools (p. 340). However, a decade ago, Wedemeyer (1981) concluded that "the pressures of unsolved educational problems have thus joined with the pressures of an evolving technology to force radical consideration of educational technology at all levels" (p. 96).

In 1987, Steier investigated the educational potential of computer technology in Alberta. Using a Dephi methodology, he asked a group of experts to identify the future of technology in education. Steier's major conclusion was that the application of computer technology at all levels of education was inevitable (Steier, 1987, p. 87). Steier claimed that while meaningful technological change is possible, and new educational tools are available, it must be understood that the application of new technologies, and the outcomes will not always be in the best interests of students and teachers. Steier simply states that new technologies can have a "positive, neutral, or negative" impact on schooling (p. 89). Advocates of new technology, Melmed and Burnham (1988) provided an example, which could reflect all three positions depending on the observer's ideology.

Melmed and Burnham (1988) suggested that educational practice is not "set in concrete": There are alternatives. Suitable interactive technology is available which merits "development and exploration" in education (p. 66). They also suggested a wide range of options exist for the restructuring of classroom practice and school organization, and claim that "empirical evidence reveals that students can learn in many ways: independently; in small and large groups, with or without a tutor or teacher; and from books, television and computers" (p. 65). The Melmed and Burnham model aims at "improved learner productivity" using "an instructional approach that emphasizes the application of science and technology to the unfolding problems of mass education" (p. 65). It is important to note that Melmed and Burnham's priority was "not how best to facilitate student learning, but how best to facilitate the education of all school-age students at a cost society is prepared to pay" (p. 65). Their priority is debatable, but they supported their argument with a statement that "there is no evidence that traditional classroom instruction optimizes mass education at current prices for America's school-age population; there is evidence that it fails many" (Melmed & Burnham, 1988, p. 65).

Wall (1985) presented a more cautious view in a survey of school programs using distance teaching innovations. The programs covered a range of subjects, used a range of communication technologies and varied greatly as models of distance education. Wall found that they all compared favorably with traditional education, but suggested that although new technologies appear to have great potential for schools, future use is still uncertain. As Morrison (1989) suggested, "acceptance" of new technology is a major organizational problem. Wall (1985) agreed with this premise and suggested that "the major roadblocks are usually political, not technological" (p. 29). The politics concern all the stakeholders; decision makers, administrators, teachers, students and community members.

The literature cited above raised the following questions consistent with the objectives of this study:

1. Does distance education technology provide access to equitable educational opportunities for students in small schools?

2. What models of distance education are being implemented? What technology is being used?

3. What are the attitudes of administrators to the use of distance education and technology in schools?

4. What impact has distance education had on parents and the community?

5. In what ways are jurisdictions and schools supporting the use of distance education with respect to policy, finance and public relations?

6. What problems or issues still need to be addressed with respect to distance modes, attitudes, and support?

Implications for Teachers and Teaching

Heidt (1978) suggested that teachers' attitudes and ability to use new technology are influenced by a lack of experience, a lack of training, and a lack of organizational support and organizational will to change:

> Teachers are bewildered, in particular, by the rapid development of ever more complicated technical equipment . . . and by the recommendation of their usage in the classroom, where media are said not only to facilitate the art of teaching, but to replace the teacher himself - at least with regard to important functions. Because of an inadequate training they feel at a loss in the domain of modern media and hence look for handy instruments and prescriptions to answer the question of which medium to select for a particular instructional situation. The relevant criteria for their problem are not only of an educational nature, but also considerations of cost, availability, time spent, organizational criteria, etc. (p. 11)

Fasano (1984) also identified teacher control as a major gateway to technological change. She identified teachers' attitudes, motivation, personality and their training as "important facilitators--or bottlenecks" to technological change and possibly the improvement and reorganization of education (p. 66).

Goodlad (1984) explained that "visions of such developments have led to excessive rhetoric regarding the replacement of teachers and even schools by machines" (p. 340). Apple (1988) argued that the tendency for the curriculum to be rationalized, industrialized and centralized through the use of technology is a threat to teachers. Using communication technology for delivery of predesigned commercial materials to students is seen as a process of "deskilling teachers" (p. 276). According to Steier (1987) the opposite effect will probably occur. Teachers will require additional flexibility and skill to adapt and use the wealth of educational tools being made available to them. Steier concluded that,

> Developments related to computer technology will place increased demands on teachers. These demands will be reflected in increased preservice and inservice activity. The teacher's role will gradually change from a disseminator of knowledge to a facilitator of learning. (p. 89)

According to Fullan (1982) the implementation of educational change usually involves three components: "(1) the possible use of new or revised materials, (2) the possible use of new teaching approaches and (3) the possible alteration of beliefs" (p. 30). Wedemeyer (1981) identified the third component, teachers' beliefs and attitudes, as the major obstacle to successful implementation of change in teaching practice, mainly because "teachers tend to teach as they were taught" (p. 34). Wedemeyer claimed that conventional teaching and learning make use of old mystiques that persist as though there are no alternatives. "What we seem to have clung to, however, is chiefly form, i.e., keeping teacher and learner together in the same place and time, and mystique - the mystical values of the particular means, discipline, or order" (p. 34).

Batey and Cowell (1986) stated that "whenever teachers are expected to adapt their teaching techniques, use new equipment and technologies, or relate to learners in different ways, there are important implications for pre-service and in-service teacher training" (p. 16). Batey and Cowell provided an extensive list of training needs for tutor/markers external to the school, and for teachers in their new roles as distance education supervisors within schools. Apart from technology, the important aspects of this list suggest tutor/markers need training and preparation in teaching lesson plans partly or completely developed by others, teaching without a group of responsive students in attendance, and in planning differently for the provision of the social and emotional needs of students. Teachers supervising distance education within schools need preparation and training in facilitating programs and materials prepared by others, and assisting, motivating, evaluating and recording students' progress in new ways.

Gwyn (1984) looked at the demands new communication technology places on teachers in their new roles, and found that as "users" they need to gain competence and knowledge in three areas:

> 1. Basic machine competence, and competence in management of [sometimes scarce] hardware resources.

2. Competence in the range of applications offered by new information technology.

3. Competence in the pedagogic use of applications of new information technologies. (pp. 13-14)

Fasano (1986) suggested that each of these aspects considerably expands the role of the teacher, but comments that "one of the most welcome trends has been a discernible move away from the emphasis on the teacher as programmer in the direction of teacher as an informed user" (p. 71). With respect to technology related competencies, Fasano commented that teacher training programs in most OECD member countries have concentrated more on in-service than pre-service training because of the efficiency and flexibility of this method. Fasano acknowledged the "fact" that teacher education programs are difficult to change quickly and adapt to new technology. Although new technologies have implications for all subject areas across the teacher training curriculum, these new areas of learning must compete with an already overcrowded curriculum. Fasano cited several case studies which address the difficulties of teacher education in such a dynamic area, and concluded that there is no easy answer, that more research is necessary, and more professional development or in-service is necessary to make up the deficit in pre-service training.

In the training and retraining of teachers to apply alternative teaching methods which include new technology, de Landsheere (1984) advocated "thoroughly reforming . . . underlying attitudes and habits of educational practice" (p. 66). However, de Landsheere also cautioned that retraining that includes pedagogical, technological and attitudinal aspects will be a complex and costly operation. Le Corre and Schwartz (1984) added that such training, even for a limited number of teachers, is essential if meaningful and lasting technological change is to happen. They advocate the recruitment of motivated teachers to be technology coordinators in schools, but suggested that to train people to perform at such a high level of specialization requires no less than a "long-cycle training" course taking a full year (p. 51).

Gwyn (1984) examined data from several countries and concluded that there is a growing demand for well trained technology coordinators to act as change agents in schools. The coordinator is expected to be a motivator of teachers and a resource person, knowledgeable about new information technologies and new teaching practices; to lead school-based in-service training; to function as a manager of hardware and software resources and technical support staff; and to advise on new acquisitions as well as new educational developments. According to Valerien (1984) the coordinator's function is "a recognized part of the strategy of dissemination [of new technology] in France" (p. 69). Fasano (1986) cited several other case studies in various countries to identify the important contribution being made by this new category of teacher. According to Fasano these studies agree with Gwyn's claim that the coordinator's role is the key to encouraging teachers to try new techniques and be "users" of new technology. Alberta Education (1990b) reported that,

> Where a school, system or consortium coordinator, respectively, is not available to see that the program adheres to policy and procedures and generally runs effectively, this deficit is noticeable in a number of frustrations and inefficiencies in the program; hence, a coordinator is deemed essential for efficient distance delivery. (p. 1)

The literature cited above raised the following questions consistent with the objectives of this study:

1. What are the attitudes of teachers to the use of distance modes and various media in schools?

2. In what ways are jurisdictions and schools supporting the use of distance education?

3. What impact has distance education had on the deployment of teachers within schools and throughout the school system?

4. What are the roles of tutor/markers, supervising teachers and distance education coordinators in schools?

5. What are the inservice needs of tutor/markers, supervising teachers, and coordinators with respect to their new roles?

6. And, what critical issues still need to be addressed with respect to teachers and teaching, and distance education arrangements in school?

Implications for Learners and Learning

According to Batey and Cowell (1986) "the self-motivated, task-oriented learner who is well-organized and independent is the ideal student for a distance education program. Indeed, this IS the ideal student. As we all know such students are rare" (p. 18). Batey and Cowell claimed that several studies have shown that school students have definite psychological and emotional learning needs, particularly with respect to distance education. The transition from being a passive and directed learner to being an independent and self-disciplined learner appears to be a problem for most school students. They need constant contact with the specialist teacher, quick "turnaround" of work submitted for marking, and a close working relationship with an in-school supervising teacher, or home tutor, to provide support and motivation, and to facilitate the distance learning process successfully (Balay, 1978; Birkett, 1988; Froese, Harris, Restall & Witherspoon, 1987; Taylor & Tomlinson, 1984). Birkett, in particular, emphasized that if a distance education student is to succeed, then the student, tutor/marker, and supervisor partnership "is critical and must be based on team work" (p. 124). Birkett identified this aspect as the most significant finding in her study of organizational support for distance education students.

Holmberg (1986), has also drawn our attention to three "ideal" principles, identified by Worth (1982), which may need to be considered with respect to the organizational arrangements of distance education in schools:

1. That effective learning derives from the purpose and needs important to the individual.

2. That learning occurs in varied ways and places.

3. That styles of learning and of teaching may differ significantly from person to person and from one setting to another.
(Worth, 1982, as quoted in Holmberg, 1986, p. 43)

The underlined phrases in these principles provide the themes for the following discussion.

Purpose and Needs

The purpose and academic needs of high school students in small schools are assumed to be similar to those in larger schools. Their main purpose is usually to gain credentials to move on to a chosen career. Students need access to a range of subjects which suit their abilities, interests, and career aspirations. Hansen (1987) commented that the chief weakness of most small schools is "the paucity of curricula offerings" (p. 6). While small schools may not have specialist teachers in all subjects, usually there is no problem in providing an on-site teacher to facilitate and supervise the distance learning process to expand the curriculum. Garrison (1987) emphasized that distance modes and media can considerably expand the curriculum and provide learning opportunities "to those who might otherwise be excluded from an educational experience" (p. 45). While distance education is expected to expand the curriculum, advocates have suggested that this innovation could also provide opportunities to enhance and enrich the curriculum.

Enhancement, in the sense that the existing curriculum may be improved rather than expanded by distance modes or media, is an issue which has received less attention in the literature. Reynolds (1986) investigated the enhancement of a vocational agricultural course in a small school which involved the adaptation of a computerized telecommunications service called "AgriData." The service provided computer access to current agricultural events, news, market and trend reports, a collection of over 500 lesson modules, and an electronic mail service for users. This particular distance model did not have an external specialist teacher, but provided teachers and students with an "up-to-date" data bank, sufficient content for complete courses, and an element of realism and relevance for a rural school. Reynolds observed that although the project had been in operation for only six months, students exhibited "a new enthusiasm" for the subject and "a renewed interest in seeking new information" (p. 4). There were other significant outcomes which had not been expected initially. Members of the local farming community showed considerable interest in the information provided daily by the AgriData service, and requested evening classes in the use of the service and the AgriData lessons. Teachers also took advantage of the opportunity to develop their knowledge and teaching skills with this dynamic educational resource. Batey and Cowell (1986) elaborated on such potential and suggested that school-based distance education systems could give teachers access to new staff development opportunities which could range from discussions of single topics and presentations to whole courses or degree programs.

Sawyer and Delong (1986) added another distance education dimension, curriculum "enrichment" to the concepts of expansion and enhancement already dealt with. They described how correspondence courses were used for a particular group of learners for enrichment in a Talent Identification Program (TIP) in the United States. Seventh grade, students who scored in the upper 3% of a national intelligence test, were provided with correspondence courses to supplement summer residential and precollege programs. Sixteen correspondence courses were offered in writing, languages, literature and natural sciences. According to Sawyer and Delong, these courses provided a challenging educational option for students whose schools were unable to respond to their special educational needs. They reported that students performed at levels "equal to, or higher than, college undergraduates" (p. 44) The composite college/correspondence programs

> Gave talented students the opportunity to learn at their own pace and at their own high level of comprehension; encouraged the development of support and coping strategies for brilliant students; and, inspired their home schools to provide educational programming appropriate for the academically talented" (p. 44).

Reynolds (1986) commented that the "use of AgriData by teachers and students is limited only by one's imagination", but "of particular interest is the capability for students to access a multitude of reference material quickly when researching a topic" (pp. 2-3). Fasano (1986) suggested that while the greatest potential of new information technology is the quantity of information that can be accessed, the most important educational challenge is providing access to high quality and relevant learning experiences. Adapting technology and data, from a vast quantity of available information, to the specific needs of learners and the purposes of society generally should be important goals for educators. Fasano declared that learning by rote may be a thing of the past and that accessing and applying current and relevant information from an existing store of data is what education should be concerned with, now and in the future.

The literature cited above suggested that distance education should be a cooperative process, involving the student, tutor/marker, and the supervising teacher as a team. The "access" and "equity" needs of students were dealt with in terms of the opportunities distance education may provide for expansion, enhancement and enrichment of the curriculum. The literature also suggested that a distance education system may have other possibilities such as facilitating the learning needs of teachers and community members.

The content of this section raised the following questions consistent with the objectives of this study:

1. What are the implications of distance education arrangements for students needs with respect to the expansion, enhancement and enrichment of the curriculum of small schools?

2. Do these distance education arrangements provide learning opportunities for teachers and other adult learners?

3. What critical issues still need to be addressed with respect to the needs of students, and other learners, such as teachers and adults in the community?

Learning Occurs in Varied Ways and Places

In 1970, Illich stated that "the right to learn is curtailed by the obligation to attend school" (p. 7). Among other issues he objected to the idea of school, the traditional school–room, and the teacher as the custodian and purveyor of knowledge. Illich objected to the concept of traditional schooling being the only place and the only way to learn. Wedemeyer (1981) asked, if people can learn in a variety of ways in everyday environments of life, work, and leisure; in a variety of places; alone or in groups; with or without a teacher, "where, then, is the environment for learning?" (p. 29). Wedemeyer's answer that "learning is a phenomenon that occurs only where the learner is," still confronts strongly held beliefs about schools and teaching (1981, p. 30). Wedemeyer argued that,

> If learning occurs outside the environment of the school, and does not always occur within it, then we must question the assumption (a given in our culture) that specified place, time and environmental conditions are essential for learning. If learning can and does occur anywhere, any time, under apparently random conditions, then perhaps some of the effort we put into creating special environments may not be necessary. (p. 29)

But to change fundamental beliefs about schools may be extremely difficult. Fasano (1986) suggested that "teachers' territorial imperatives set powerful boundaries" to the realization of alternatives to traditional schooling. Fasano claimed that without major qualitative changes to the existing rituals, rules, and management of schools then future schools will resemble those of today, "whose very existence is a reflection of the pre-computer period" (p. 78). To Fasano (1986) and Wedemeyer (1981) these qualitative changes confront the basic assumptions about schools, that a "specified place, time and environmental conditions are essential for learning" (p. 29).

At the beginning of this chapter it was stated that Alberta has redefined the concept of a school and described it broadly as "a structured learning environment through which an education program is offered to a student" (Province of Alberta, 1988, p. 8). Through this broader definition educators have recognized that learning may occur, and may be achieved, in any suitable environment, via any suitable means, and at times appropriate to the learner.

At the 1990 Alberta Teachers' Association Conference, distance education and new organizational arrangements were prominent topics. Of the twelve distance education resolutions approved seven sought to restrict how, when or where distance education could be used in schools (ATA News, May, 1990). Understandably, most of the resolutions were aimed at protecting the "teachers' territorial imperatives" by reaffirming the existing roles of teachers, in the traditional classroom setting, and the ways, places, and times students are to be taught.

The literature cited above raised the following questions consistent with the objectives of this study:

1. What impact has distance education had on the way, the place, and the time that students are taught and learn?
2. Has distance education provided flexibility for scheduling students and staff?
3. What critical issues still need to be addressed with respect to the ways, places and times students learn through distance education in schools?

Different Styles of Teaching and Learning

Wedemeyer (1981) claimed that institutional styles of teaching and learning have been the same for many years. That is, the pedagogy of the classroom has been relatively static for most of its history. Our concepts of schooling go as far back as Plato, and "the Platonic model (learners at the feet of the master, interacting voicebox-to-voicebox, earpan-to-earpan, eyeball-to-eyeball) has provided the conventional continuous loop communication for nearly all institutional education" (p. 32). Wedemeyer went on to say that educators have consistently defended this model, over time, and resisted change brought with new technology:

> The invention of writing was perceived by Plato as a threat to proper learning. Similarly, educators since Plato have looked with a mixture of fear, disdain, and

> suspicion at communication improvements which have revolutionized most of human activity, but have left institutionalized education relatively unchanged. (p. 32)

According to Stephenson (1984) the latest advances in technology "gives us the opportunity to move beyond this impasse" (p. 64). Although new technology, and the design of educational software, is only in its infancy, technology can do "superbly" many of the routine tasks that use up much of a teacher's time and energy. Many of these functions can be individualized and automated in such a way that students find them engaging, "in ways that a teacher in charge of a class of 25 cannot possibly do, and with a patience that even a saint could not equal" (p. 64).

Fasano (1986) suggested that unfortunately the state of education in most OECD countries does not appear to be receptive to such change. The current organization of teaching and learning does not suggest it will be easy to adapt new pedagogy and practices that take advantage of new information technologies. Fasano commented that Goodlad's 1983 study of US schools has revealed situations that are common in most other countries. "Current practices do not allow much autonomy to the learner, nor much interactivity or personal exploration and discovery" (Fasano, 1986, p. 65). Goodlad (1983) found that

> 'Teacher talk' was by far the dominant classroom activity. Teachers rarely encouraged student-to-student dialogue, or provided opportunities for students to work collaboratively in small groups, or to plan, set goals, determine alternative ways of achieving these goals . . . the emphasis was on recall, not on problem solving or enquiry . . . (p. 552). Furthermore they [the students] apparently rather enjoyed the dominant activity of listening, which demands so little of them. (p. 554)

Goodlad (1983) went on to say that teachers "out-talk" their students in the classroom by a ratio of three to one. Assuming that talking is "an important avenue to learning . . . [then] teachers were doing most of the learning" (p. 554). Fasano (1986) suggested that new informational technologies offer an alternative pedagogy based on collaborative, small group work, as well as student-centred and individual learning. Of course, these techniques have been successfully used by educational innovators for some time working with ordinary educational tools. However, there is a point "in the relationship between pedagogy and mass education where new information technologies have most to offer" (p. 66). Fasano went on to say that the pedagogy is not new, nor is it advocated for all students, but it should be used where appropriate to complement and improve existing practice. Fasano questioned whether the "historical obstacles" such as the "Platonic model" and dominant teaching and passive learning styles can be changed to "make way for the new technologies, and whether the education system can operate a shift from a pedagogy of convenience to a pedagogy of efficiency" (p. 66).

A pedagogy of efficiency has received little attention in recent research on technology in the classroom according to Fasano (1986). Most of the data that exist, appear to be inconclusive and anecdotal, but Fasano offers several enlightening passages to support the idea that technology can improve the efficiency of teaching and learning.

> A Canadian teacher commented: Some of the bright children are now wanting more time alone on the machine. . . . I am giving them some lone time but they are having to come back and teach the rest of the group. . . . This way they are bringing the group along with them. (Carmichael, Burnett, Higginson, Moore & Pollard, 1985, p. 252)

> In every study in which computer-based instruction substituted for conventional teaching (either for a unit, a module or for an entire course), the computer did its job quickly - on average in about two-thirds the time required by conventional methods. It is clear that the computer can function satisfactorily in college courses and at the same time reduce the time spent in instruction.
> (Kulik, Kulik, & Cohen, 1980, p. 538)

> Although far from scientific soundness, the anecdotal evidence is particularly compelling in the case of remedial learning. In a number of instances, the low achievers, the school failures, have been observed to learn, at least in the basic skills, in a relatively short time where years of conventional teaching/learning situations had failed to produce any noticeable results. (Naymark, 1983, p. 46)

> Observations of older pupils in remedial education suggest that computers might have specific motivational virtues: In the context of all-round failure at school, computing as an activity strongly stimulates and motivates pupils. The positive reinforcements, the ability to check out an abstract activity immediately, the scope for creativity, the ability to reverse the traditional teaching situation by instructing the computer, all help the pupils to get out of their anti-school attitude and build up their confidence in themselves. (Naymark, 1983, p. 49)

> Watching many learners use courseware leads increasingly to the belief that the learner learns more happily when he or she has control over his or her own objectives and methods of learning. (Godfrey & Sterling, 1982, p. 2)

The implications for styles of learning and teaching, recognized in these quotes and scenarios, are highlighted by Naymark (1983): "Those beneficial aspects are interactiveness, the learner's being continually stimulated, instant self-correction, independence, creativity, and the learner's intensely active involvement" (p. 46). If this change toward active learning is assumed to occur with distance education, then surely it has some implications for students, teachers and the organization of schools.

The literature cited above raised several questions consistent with the objectives of this study:

1. What are the implications of distance education for the work of teachers and the learning activities of students?

2. What effect does the ability to individualize instruction have on the organizational arrangements of schools?

3. What critical issues still need to be addressed with respect to distance education and the organizational aspects of teaching and learning ?

Implications for the Curriculum

Batey and Cowell (1986) suggested that the curriculum at the high school level places no constraints on distance education. While they commented that there appears to be no research "to indicate which delivery system is best for presenting a given content," they stated that any subject "normally taught in schools can be effectively presented in a distance format" (p. 13). Clark and Schieman (January, 1990) disagreed that the situation is as simple as Batey and Cowell would have us believe. In their recent formative evaluation of distance education in Alberta, Clark and Schieman suggested that the curriculum content, its presentation, student ability, and mode of learning can create a complex pedagogical matrix. They offered some solutions, but also strongly suggested that the "course content and methodology vis-a-vis student ability and mode of learning" is an issue which warrants further attention by researchers. Clark and Schieman observed that in their particular study the "print materials were not appropriate for all students" and that most courses were "reading-dependent" (p. 18). Because a large number of the students using distance education courses were from a low ability group they recommended the development and use of more audio-visual materials. They also suggested that the distance media, the course presentation and content they observed were more appropriate for talented and motivated students. They recommended that "independent study materials be made more palatable" for less able students; that course designers "provide alternative paths through the content to accommodate varying levels of ability", and that students "should also be taught how to use non-print resources effectively" (pp. 18-19).

The literature cited above raised the following questions consistent with the objectives of this study:

1. What courses are offered by distance education in Alberta schools?
2. How appropriate are these courses for different ability groups?
3. And, what problems or issues still need to be addressed with respect to the distance education curriculum ?

Implications for Schools

In the literature cited it is not generally suggested that distance education and technology should, or could, replace conventional schooling completely. However, it does appear that restructuring of the classroom and school organization to some extent is necessary to maximize the use of new technology and distance education. The literature also recognized that distance education and technology have the potential to supplement a school's curriculum; to enhance, expand, and enrich the curriculum; to vary the pace, time and the place for learning for students and teachers, and provide flexibility for teachers, students, and the organization of schools.

To substantiate such claims is difficult because empirically based research literature on this topic is sparse. Fasano claimed that in 1986, "virtually no quantitative data exists on alterations to established school schedules, new allocations of teachers and teacher time implied by technological changes" (p. 66). However, Haughey (1990) recently described four models of distance education used within Canadian schools. These models ranged from "high teacher control to high student control of various aspects of the learning activity" (p. 5). High teacher control refers to a process whereby a course of study is supplied by an external agency and taught by a teacher, who may also be the tutor/marker, in a regular class within a school. High student control implies almost complete independence for the student within the school. This process is similar to the "traditional correspondence model, in which students work on materials at their own pace but without local support" (p. 5).

Batey and Cowell (1986) suggested a comprehensive list of management and scheduling concerns, which may result from the implementation of distance education in schools. They commented that,

> The more a distance education program differs from the normal events and procedures in a school district, school or classroom, the more new management skills will be required in order for such programs to succeed. In general, the aspects of management which most frequently change due to the introduction of a distance education program are:
>
> 1. Establishing lines of responsibility
> 2. Obtaining and handling funds
> 3. Planning
> 4. Record-keeping and reporting
> 5. Obtaining managing and repairing equipment
> 6. Scheduling classes
> 7. Scheduling existing staff
> 8. Managing program change, and updating program content
> 9. Managing contracts and financial agreements
> 10. Cooperating with other educators

11. Dealing with entities in the community and occasionally with new clientele. (pp. 21-22)

Many of these aspects are dealt with, to some extent, by Clark and Schieman (1990) in their recent evaluation of the distance education pilot studies in Alberta. They observed that school administrators "tended to underestimate the administrative, logistical, financial, and personnel requirements to make distance education work smoothly" (p. iv). They concluded that schools "tended to retain structures similar to those which they had used in the past" and that "the potential flexibility inherent in an independent study approach was forsaken in favor of ensuring course completion" (p. iv). The evaluation included some positive observations with respect to teachers adapting this new technology, but also expressed concern about two organizational issues. The first concern expresses a sentiment that is well recognized at the tertiary education level, that distance education is perceived to be second rate, for second rate students. Clark and Schieman suggested that students "channeled" into distance education are usually the less-able students who will have the most difficulty learning through distance education. This appeared to be an unfortunate situation for students, and did little for the image of distance education.

The second concern expressed much about school administrators' reluctance to alter the school routine to adapt to change and new technology. Clark and Schieman (1990) stated that, "the value of interactive, real-time activities seem to be regarded as 'add-ons' to the program, and the benefits are not perceived to outweigh the disadvantages associated with adjusting school timetables to permit distance education students to participate" (p. vi). Clark and Schieman recommended that schools should adapt the school routine to distance education requirements and facilitate interactive technology for students when required.

The literature cited above raised the following questions consistent with the objectives of this study:

1. How is distance education organized in schools?

2. What effect have these distance education arrangements had on the organization and management of schools?

3. What problems or issues still need to be addressed with respect to these new organizational arrangements?

Implications for School Systems

Fasano (1986) claimed that although new technology for large-scale teaching and learning are just being explored and developed, educators should be aware of the impact technology can have on educational systems and organizations. The effects are clearly visible in other sectors of society, such as production and service, where "systems have been changed profoundly, their structure and organization [have been] as deeply affected as the conditions of work they offer" (p. 105). Fasano (1986) predicted that educational institutions would engage in a transformation of organization and structure by forming partnerships, and cooperating and coordinating with other parts of its own system. Eventually this interaction will occur with other systems "given the dispersed location of expertise" (p. 105).

While this process appears to be happening to some extent at all levels of education, collaborative arrangements among school systems are not well documented. Much of the writings refer to post-secondary initiatives. George, Landsburg, Sturrock and Yerbury (1989) described the development of the Open University Consortium of British Columbia begun in March 1984. The aim was to provide students with the opportunity to gain a degree through distance education courses from the three British Columbia universities and the Open Learning Agency. After five years of operation, George et al. (1989) commented that "distance educators in B.C. are reviewing the evolutionary development of the open learning system with guarded optimism" (p. 20).

In 1986, the Ontario government established a cooperative distance-learning network called Contact North/Contact Nord. Three levels of education are included--two universities, five colleges, and the Independent Learning Centre (ICL), which provides correspondence courses for primary and secondary school students and for adult basic education (Anderson & Nelson, 1989). This consortium was established as a coordinating body to provide education at all levels for individuals geographically or socially isolated. The effects of this evolving organization were summed up by Anderson and Nelson (1989):

> The two central theses of the Contact North/Contact Nord project are, first, that access to distance education at all levels can be improved through collaborative institutional effort; second, this kind of initiative, along with appropriate resources, has a synergistic effect beyond the participating educational institutions. (p. 210)

According to these authors, the Contact North Consortium seeks to avoid duplication of physical resources and to provide advice on local and provincial policy from the perspectives of all the participant groups. The Consortium also provides administrative expertise with regard to contractual arrangements, acquisition and compatibility of technology, student support services, professional development, course development, and consolidation and expansion of community and institutional cooperation.

In a review of post-secondary initiatives, Konrad and Small (1989) commented that "the 'openness' of distance education calls for collaboration among individuals and institutions" (p. 197). While educational institutions are not known for their cooperation with other institutions, fiscal constraints and initiatives to increase the efficiency of postsecondary institutions have challenged their traditional independence. Konrad and Small (1989) suggested that "educational institutions must move away from a posture of independence and isolationism toward a commitment to interdependence and cooperation" (p. 201). They proposed that collaboration can reduce costs, eliminate duplication, strengthen the quality of courses and services, and provide "better options for an ever-increasing diversity of learners" (p. 202). They argued that "distance education cannot achieve its potential without collaboration" (p. 202). However, there are a number of "barriers" which must be overcome: professional freedom and independence, institutional autonomy, academic credibility, lack of trust, fiscal constraints, and structural arrangements. Emphasizing the importance of the last element, Konrad and Small stated that "in a collaborative activity, appropriate structural arrangements must be established to reflect the 'ownership' of all participants and to maximize responsiveness to emerging opportunities" (p. 199). From a survey of the literature, they provided three models of collaboration: information sharing, strategic collaboration, and consortia.

Information Sharing

Konrad and Small (1989) commented that information sharing is "the simplest level of collaboration" whereby educational "institutions may exchange information about students, programs, and operational details via various media, gatherings and formal and informal organizational arrangements (p. 199). Konrad and Small cited several examples of provincial, Canadian, and international associations exclusively concerned with the sharing of information and the promotion of post-secondary distance programs and initiatives. Apart from these formalized arrangements, they also acknowledged the importance of informal information sharing of ideas and experiences in the current exploration and development of distance education.

Strategic Collaboration

Strategic collaboration is defined by Konrad and Small (1989) as "any formal agreement to collaborate in a limited way" (p. 200). They cited several Canadian post-secondary institutions which have contracted to lease or supply courseware and services to each other. They also identified a number of media ventures in various provinces which "exemplify strategic collaboration" (p. 200). One notable example is the Alberta Educational Communications Corporation (ACCESS). This agency was formed by the Alberta Government "to develop and deliver programs via satellite, teletext, videotext, videodisc, and radio in cooperation with other educational agencies" (p. 200). It could also be said that the Distance Learning Centre (DLC), in conjunction with the Learning

Resources and Distribution Centre (LRDC), has now taken on a strategic collaboration role. Previously DLC was an integrated part of the school system and provided a centralized correspondence education service to schools. Recently DLC has decentralized its role with respect to schools, and become a supplier of educational resources. The DLC sells its courseware and services through LRDC, and may provide technical expertise, but to a large extent school jurisdictions and distance education consortia are expected to administer their distance education programs and provide tutor/marker services. However, tutor-marker services are still provided for a large students who register with DLC.

Consortia

Konrad and Small (1989) describe consortia as "the highest level of collaboration . . . whereby two or more institutions agree to establish a new mechanism to undertake, on their behalf, projects of mutual interest" (p. 200). Grupe (1971) stated that the formation of a consortium represents a basic commitment by otherwise autonomous institutions "to identify, explore, and cultivate areas in which mutual action can improve their collective impact" (p. 748). The essential organizational elements for a consortium include, a formal agreement, an agent or consortium coordinator to manage the agreement, and contribution of resources by member organizations (Grupe, 1971; Konrad & Small, 1989; McKenna, 1976; Nelsen, 1972).

Consortium Agreement

According to McKenna (1976), because of the complex nature of the relationship, a consortium agreement must include procedures for these matters:

1. Joining or withdrawing from membership or disbanding it.

2. Determining the details for funding arrangements as in amounts to be collected, manner of collection, holding of funds, and disbursement.

3. The basis for representation--which institutions may join, by whom they shall be represented and the number of representatives, etc.

> 4. Governance. Will the consortium be guided by an executive board, chairman, etc? (p. 10)

Dennison (1986) cautioned that "if there is to be effective coordination of distance education activities within a region, certain conditions must be met" (p. 189). Dennison listed the conditions as follows:

> 1. The mandates and jurisdictions of all affected institutions must be respected, while ensuring that such mandates do not obstruct coordination.
>
> 2. Leadership by the appropriate government agency is essential, although government does not necessarily need to assume the managerial function in the process.
>
> 3. The prime beneficiary of any new arrangement must be the potential students rather than the institutions involved.
>
> 4. Funding policies should provide incentives to encourage institutional participation rather than the disincentives, such as lost revenue.
>
> 5. Institutions involved should have the opportunity to participate in policy making and in the resolution of disputes. (p. 189)

Consortium Coordinator

The consortium coordinator, referred to as the consortium director in higher education, is considered to be vital to the success of consortia. McKenna (1976) stated that "depending upon the extent and complexity of the consortium's activities that a full time director is essential, particularly in the early stages of a consortium's implementation and development" (p. 26). Grupe (1971) suggested that the problems and limitations of a consortium are similar to those of all cooperative organizations, that "two or three years may pass before major projects leave ground zero," and that the management of such an enterprise "requires sophisticated patience . . . and demands unusual flexibility if a phoenix is to rise out of the ashes" (p. 750). McKenna (1976) stressed that the leadership qualities of the director will be "a key factor in the success of the venture" and that management of consortia calls for entrepreneurial leadership and "authority based on the power of suggestion and persuasion--quite different from the the traditional hierarchical leadership" (p. 26). As an entrepreneur and innovator, the director must develop the consortium's willingness to work in untested areas, extend educational structures, and enhance and extend educational opportunities to more students. Because of the nature of consortia and the dynamic nature of educational change, the director must develop lines of communication and cooperation with all participating institutions, as well as various facets of government and other parts of the educational enterprise. While expanding and enhancing the educational services of the member institutions, the director must also produce evidence of financial savings that promote the survival of member institutions and justify the existence and survival of the consortium (McKenna, 1976).

Consortium Resources

Support is usually generated internally by the consortium and its member institutions by contributions such as office space, secretarial support, and by donations of staff time for planning and implementation. Funds may be derived from student fees, government grants, and membership fees or cash contributions from participating institutions. To ensure the financial support of government and participating members, Nelsen (1972) suggested that consortium advocates, as good entrepreneurs, should be able to demonstrate the potential cost-saving of consortia. Nelsen wrote:

> Granted, an examination of individual institutional budgets does not reveal an immediate reduction in expenditures; in fact, the consortium usually appears as an added expenditure. But, had individual institutions been forced to add new programs which were not self-supporting and to increase expenditures generally to become or remain an attractive institution without consortium assistance additional costs could have resulted. This type of "negative saving" or "preventative saving" can be and should be estimated. (pp. 550-551)

Nelsen concluded that "consortia can save money" and that consortia advocates should not be timid about demonstrating the fact.

Decentralization of Distance Education

In a review of the organizational arrangements for the delivery of distance education in Canada, Haughey (1990) noted the trend away from centralized provincial correspondence programs. Alternate arrangements allow local school systems to have more responsibility for the administration of distance education and employ a variety of local personnel. In a number of provinces different forms of organizational arrangements have evolved. In British Columbia, the "delivery" of the programs has been moved to regional centres whose staff worked collaboratively with the local jurisdictions. In Ontario, the provincial correspondence organization, the Independent Learning Centre, has made similar arrangements with some school systems. As in British Columbia, teachers who provided the marking were employed by the provincial correspondence organization or its regional office. In Manitoba, a number of jurisdictions have collaborated to participate in a video-, audio-, and computer- conferencing network. Teachers who provide courses are seconded from their boards by the provincial authority. None of these differing arrangements are well documented. This highlights the importance of describing the developing situation in Alberta.

To date, however, very little has been documented with regard to the collaboration of institutions and the formation of regional consortia to provide distance education in Alberta schools. Alberta Education encouraged provincial decentralization of many of the administrative and operational functions which had been centrally coordinated in the earlier parts of the "Distance Education in Small Schools" pilot project. They (Alberta Education, 1990a) recently listed, as one of the goals of the distance education projects, the encouragement of "shared educational resources among districts and local or regional consortia" (p. 2). In the latter stages of the initial three-year "Small Schools" pilot project, the strategy for continuing the innovation included the "creation of a network consortium administrative and policy structure for ultimate governance of the program at project termination" (Alberta Education, 1988a, p. 2). In a recent report to the Provincial Advisory Committee on Distance Education (Alberta Education, 1990c) one official stated that the evolution of consortia was continuing, but with a certain amount of upheaval. These new forms of organizational cooperation have implications for Alberta's educational system. However, such a claim is difficult to substantiate because of the lack of documentation and research about these significant changes and consideration of their implications for schools and school systems.

This conjecture and the literature cited above raised the following questions consistent with the objectives of this study:

1. What collaborative and cooperative models are being developed in Alberta to deal with the provision of distance education?

2. How are they structured and what are the roles and responsibilities of the administrators and teachers involved?

3. What are the implications of these organizational arrangements for the implementation and continuation of distance education, and on the provision of educational opportunities for students?

4. What critical issues still need to be addressed with respect to the formation and operation of collaborative models ?

Chapter Summary

Recurrent themes in the literature reviewed provided a framework with which to consider the implications of distance education and its organizational arrangements for (a) students, (b) school personnel, and (c) schools and school systems. These three aspects were considered in terms of the implications for seven inter-dependent elements; teachers and teaching; learners and learning; the curriculum; schools; and school systems.

This review also developed three underlying themes derived from Fullan's (1982) three dimensions of educational change; new technologies; new techniques, and attitudes and beliefs. These three dimensions were considered, with respect to the organizational implications of using distance education in schools.

At the conclusion of relevant sections, "theme" questions were formulated with respect to the objectives of this study. The interview protocols were developed from these theme questions and the major study questions (see Appendix B).

Chapter 4

DISTANCE EDUCATION IN ALBERTA

To understand the distance education arrangements, issues, and implications described in the following chapters, it is necessary to appreciate the guiding political impetus and educational policies and rationale which have shaped this innovation and its associated organizational phenomena. This chapter outlines the evolution of distance education in Alberta and includes a discussion of the new Alberta School Act, the current Secondary Education Policy, and the new High School Diploma requirements. Alberta Education's distance education rationale and initiatives are described, and suggested organizational arrangements are summarized.

The New Alberta School Act

On January 11, 1985 the Minister of Education released a report from the School Act Review Committee which outlined the framework and principles for a new School Act. Five months later on June 12, the Secondary Education Policy Statement was officially released.

Both of these documents were developed from a review which reflected the views of a broad spectrum of Alberta society and inputs from a variety of other sources. The review consisted of more than 200 submissions, 10,000 opinion surveys, a Gallup Poll, an analysis of current national and international trends, and forecasts of the future of Alberta and Canada (Government of Alberta, 1985). This process produced five "principles" which the School Act Review Committee considered were educationally sound and could be supported "constitutionally, socially, politically, and financially" (Alberta Education, January 1985, p. 4). According to Alberta Education the School Act (finally enacted in 1988) was to be based on five "clear" principles:

> 1. Access to quality education--every student in Alberta has the right of access to a quality education which is consistent with the student's abilities and provides the

> necessary knowledge, skills and attitudes to fulfill personal goals and contribute to society as a whole.
>
> 2. Equity--regardless of where in Alberta students live, they should have access to comparable standards of basic education.
>
> 3. Flexibility--within standards and policies set by the provincial government, there should be opportunities for choosing among several alternative kinds of education. Also, school boards, schools and individual teachers must have flexibility in meeting the unique needs of communities and students they serve.
>
> 4. Responsiveness--because the focus of all activities in education must be on the student, legislation, policies, and practices must respond to the needs of students.
>
> 5. Accountability--all those involved in making decisions about educational matters and those responsible for public funds spent on education must be accountable for their decisions and choices. This includes the Minister of Education, school boards and their staff, parents, as well as students. (Framework for new School Act, p. 4).

Although general in nature, these five principles, access, equity, flexibility, responsiveness, and fiscal responsibility address the educational needs of small schools. These principles are also basic elements of the distance education initiatives to satisfy the needs of small schools since 1987. Through this innovation educators sought to achieve the first four principles at a reasonable cost and comply with the fifth principle; fiscal responsibility.

The Secondary Education Policy

The Secondary Education Policy Statement, influenced by the review process, sought to understand and balance "what young people, parents, and adults need, want, and expect with what Alberta society as whole needs, wants, and expects from our school system, now and in the future" (Alberta Education, 1985, p. 3). These needs, wants, and expectations are reflected in the goals and purposes and philosophical foundations of the policy statement. The policy also articulated the philosophical basis upon which the Alberta Government has developed its social and economic goals. These goals are seen as basic to a democratic society where each citizen has the right, and should be given the opportunity, to achieve their intellectual, social, and economic potential, but at the same time each individual has the responsibility to contribute to the economic and social well-being of society to the best of their ability (Bosetti, 1990, p. 59). To achieve these ends the Secondary Education Policy stressed that all students should be given the opportunity to complete high school or to participate to the limit of their ability irrespective of their circumstances or locality. The policy also stressed the application of technology "to enhance learning and to facilitate access to equitable educational opportunities for all students" (Government of Alberta, 1985, p. 8).

The policy set high expectations for student achievement while at the same time acknowledged that the instructional program "must accommodate the developmental needs of students and differences that exist among students" (Government of Alberta, 1985, p. 8). The policy had its earliest impact on senior high school students when the minimum passing grade was raised from 40 to 50 percent. However, the policy is expected to have its full impact on students graduating from high school in the 1990s when all the new senior high diploma requirements together with the new and revised supporting programs have been implemented (Bosetti, 1990, p. 59).

New High School Programs

The new high school diploma and its credit system, which were introduced in 1988, have also influenced the evolution of distance education in small schools where small numbers of staff were otherwise unable to provide the breadth and depth of the required curriculum.

Alberta students are now given the option of taking either a general or advanced diploma program, and a certificate of achievement is available to students with limited capabilities. The new high school programs consist of two elements; core courses which all students are expected to complete to function effectively in society, and complementary courses which provide opportunities for developing the unique talents, interests and abilities of students. Overall, the secondary education policy advocated a broader curriculum to suit diverse student needs while at the same time prescribed a stronger academic core. The new high school diploma requirements came into effect for students registering in grade 10 in September 1988 and were phased in over a three year period. Tables 1 and 2 provide details of previous and current credit arrangements required for the General High School Diploma and the Advanced High School Diploma respectively.

Table 1

General High School Diploma

	Credits			
Core	1987-88	1988-89	1989-90	1990-91
English	15	15	15	15
Social Studies	10	15	15	15
Mathematics	5	5	8	8
Science	3	6	8	8
CALM	0	3	3	3
Physical Education	2	3	3	3
Additional Requirement				
2 grade 12 level courses	10	10	10	10
Specified Credits	45	57	62	62
Unspecified Credits	55	43	38	38
Minimum Credit Requirement	100	100	100	100

Source: Alberta Education. (1989). Guide to education: Senior high handbook, 1989-90. Edmonton: Author.

Table 2

Advanced High School Diploma

Core	Credits			
	1987-88	1988-89	1989-90	1990-91
English	15	15	15	15
Social Studies	15	15	15	15
Mathematics	15	15	15	15
Science	11	11	11	15
CALM	0	3	3	3
Physical Education	2	3	3	3
Additional Requirement				
2 grade 12 level courses	0	10	10	10
Specified Credits	58	72	72	76
Unspecified Credits	42	28	28	24
Minimum Credit Requirement	100	100	100	100

Source: Alberta Education. (1989). Guide to education: Senior high handbook, 1989-90. Edmonton: Author.

The new requirements have increased the number of mandated subjects, or credits, a student is required to complete to earn a high school diploma. Students now require additional credits in mathematics, science, social studies and physical education. Science for advanced diploma students has been increased from 11 to 15 credits. A new course, Career and Life Management (CALM) has been added to the mandatory requirements and a new stream of lower level mathematics and science courses (numbered 14-24) are now available in the general program.

The Alberta Trustees' Association (1990) cautioned that increased expectations and standards will place small schools, already struggling to maintain existing mandates, at a particular disadvantage. Changes to the diploma will require schools to provide a broader curriculum for both levels of the high school diploma, and are expected to cause major changes in student enrolment patterns and a shift in the demand for specialist teachers, particularly for core subjects.

Alberta Education has demonstrated an awareness of these effects and has implemented distance education as part of its strategy to overcome possible access and equity problems in small schools. According to Alberta Education (1990d) "maintenance of the local high school, with a full educational program, is essential if equitable educational opportunity for all students is to be achieved" (p. 2). To implement an innovation, such as distance education, to enhance and maintain educational opportunities in rural schools, irrespective of the changes in the high school diploma requirements, also appears to be a sensible political move by a provincial government strongly supported by the rural vote. This political dimension, tempered by considerations of equity, was addressed by a school superintendent interviewed in this study, who commented that,

> At least one reason is political. There are a few communities that do not want to see their smaller schools removed, but in other cases it's a matter that the schools are not viable. These schools are just not as large as some small schools in Edmonton, but we still feel that we owe it to those children to offer an adequate education.

Distance Education Initiatives

Alberta Education (1990d) has defined distance education as a means to "enable the school to provide courses not otherwise available by traditional delivery methods due to (a) insufficient student numbers in these courses, or (b) absence of an on-site specialist to deliver these courses" (p. 2). Alberta Education described their vision of distance education in schools as follows:

> Distance education takes the content expert to the student. It combines the traditional teacher-student relationship, the flexibility and variety of correspondence courses, and the delivery technology of telecommunications. Distance education gives students the benefit of increased course selection. Courses unavailable in a conventional setting are taught by subject specialists from a distance.
>
> Students remain in their own school. They're assisted by a classroom teacher and they receive their teacher guidance from a subject specialist. The subject specialist may be in the students' school, a different school, the community, Alberta Correspondence School or on a farm many kilometers away. The subject specialist may work from home or office.
>
> Students access information, materials and resources by mail, telephone, computer, facsimile machine, teleconference convenor, satellite receiver, or by video and audio cassette players. Telephones, fax machines, and computers give students quick response and evaluation of completed assignments. (p. 2)

Several important aspects of Alberta Education's description of distance education need to be highlighted. Distance education is primarily school based and is designed to be used in a classroom setting. Unlike the traditional correspondence model, where students usually work alone and use print media, distance education encompasses a variety of teaching modes and media including computer applications such as computer managed learning (CML).

For the past four years the main thrust of distance education development and implementation has focused on grades 10, 11, and 12 in small rural schools. According to Alberta Education (1990d), at the beginning of the pilot studies in 1987, 66 distance education courses were offered to 347 students. During 1989-90, after the initial pilot studies had been completed, 80 high school courses including nine CML mathematics courses were available and more than 80,000 credits were taken by over 6,000 student course enrolments in small rural schools throughout Alberta. While the educational opportunities in small schools have increased and improved considerably with distance education there are still a substantial number of students who take courses by correspondence. In some small schools all three modes are available and students may take courses by distance education, correspondence, or regular classroom instruction.

Distance Education Finance

Alberta Education (1990d) stated that "since 1987, provincial funding has supported this initiative, and continues to be made available to jurisdictions in need of financial assistance to provide equitable educational opportunities to all students in the province" (p. 13). During 1987 and 1988 funds restricted to schools and jurisdictions involved in the distance education "pilot" studies. At the beginning of the 1989-90 school year a Distance Education Grant was made available to all "eligible" jurisdictions

> To provide qualifying school jurisdictions with funding to enable low enrolment senior high schools to offer a wider range of student courses than under present circumstances. The grant will support the acquisition of Distance Education programs, instructional services, technologies and coordination services at the school, school jurisdiction and consortia levels. (p. 2.2)

According to the Alberta Schools Grants Manual (1989), in the initial year (1989-90) the Grant consisted of two components:

> 1. A one-time equipment accession and installation grant for each qualifying school; and
>
> 2. An operating grant based on the number of distance education student-credits. (p. 2.2)

To be considered eligible for a Distance Education Grant, jurisdictions and high schools were required to meet the following criteria:

> 1. Fewer than 150 senior high school students enrolled as of September 30.
>
> 2. Offering at least one course using distance education technology.
>
> 3. At least 30 kilometers from a high school with 150 or more senior high school students.
>
> 4. A jurisdiction assessment per student of less than $100,000. (p. 2.2)

The fourth condition is an equity component which takes into account the ability of local government and school jurisdictions to pay for their own educational needs. The "operating cost" component of the Grant decreases to zero as the local tax base or "jurisdiction assessment" increases to $100,000. While the operating cost component was also determined according to the number of credits taken by students, another equity factor was included so that the Grant decreases to zero as the high school enrolment increases to 150 students. A high school with 150 or more students is expected to be self-sufficient and able to provide a satisfactory high school program without financial support for distance education alternatives.

The Alberta School Trustees' Association (1990) provided a detailed explanation and analysis of the Grant and a discussion of what it believes are deficiencies with regard to the equity factors. The Trustees' Association argued that the equity factors were unnecessarily harsh. Although most eligible schools (139 out of 145) applied for the grant in 1989, schools were able to access only 55% (4 million dollars) of available funds for "recognized operating costs." Whereas, the conditions applying for the 1989-90 "one-time-only" grant for "recognized equipment costs" were not as restrictive and 100% (3.1 million dollars) of funds were able to be accessed. Because of the operating cost equity restrictions, school system claims for Grant monies totalled only 7.1 million dollars of the 10.1 million dollars initially made available by the government for the 1989-90 school year (p. 7).

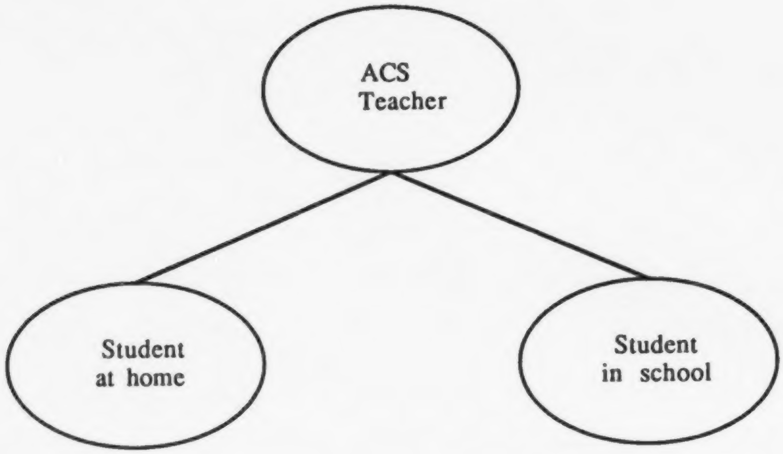
According to Alberta Education (1990d), the Grant is not expected to cover the total cost of a distance education program, and "it is expected that districts [jurisdictions] wishing to participate will contribute to the cost from local resources as they do for all other school programs" (p. 9). The Alberta School Trustees' Association (ASTA) commented that distance education "is seen by Alberta Education as being additional, not [an] alternate, means of providing courses at the senior high school level" (p. 7). However, the ASTA suggested that this current rationale and Grant formula does not fully acknowledge and sanction the potential of distance education to play its full equity role in small schools. The increased high school curricula and graduation standards, recently implemented, place small schools already struggling to maintain existing mandates at a disadvantage which is not being fully addressed by Alberta Education through the Distance Education Grant. According to the ASTA, the Grant does not compensate small schools for the difficulties and limitations encountered in providing courses of study necessary for graduation. Rather, the current rationale seeks to encourage local school systems and their senior high schools to provide a wider array of courses of study instead of consolidating the existing courses of study and graduation requirements.

Distance Education Models

Alberta Education (1990d) has identified and described four successful distance education models and organizational arrangements implemented in Alberta schools and jurisdictions during the past four years. However, Alberta Education cautions that while each has its strengths and weaknesses, no model or set of models exist that will suit the organizational and educational needs of all schools. The basic Alberta Education models which involve the Distance Learning Centre (DLC), and the Learning Resources Distributing Centre (LRDC) are described below in Figures 1 to 4. The ACS acronym refers to the Alberta Correspondence School, which was what DLC was called before its name was changed in 1991.

Figure 1

ACS-Based Model

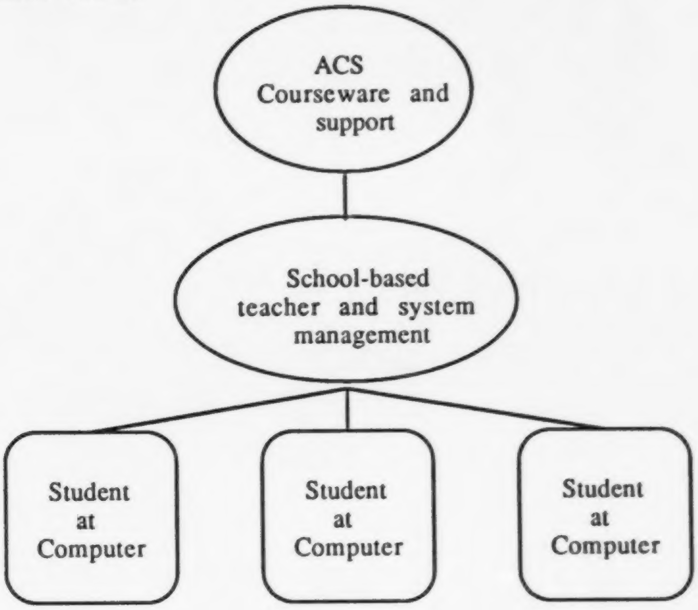


Source: Alberta Education. (1990). Distance education handbook. Edmonton, AB: Author.

The "ACS-Based Model" shown in Figure 1 is the traditional correspondence mode still used by more than 16,000 secondary students at home and in schools throughout Alberta (Haughey, 1990). Before 1987 this was the only form of distance learning available in Alberta. Students work independently on materials at their own pace and although they may write or telephone their ACS teacher for assistance this form of interaction is reported to be minimal. Correspondence is renowned for its slow turn-around of completed assignments by mail and a lack of tutorial assistance and guidance which contribute to an unsatisfactory 30% completion rate by students. This model has now been superseded by more efficient modes which Alberta Education (1990d) reported have a 90% completion. Through the application of technology and by localizing tutor/markers the turnaround time has decreased and the student teacher interaction has increased. These improvements have tripled student completion rates.

Figure 2

Computer-Based Model


ACS
Courseware and support
School-based teacher and system management
Student at Computer
Student at Computer
Student at Computer

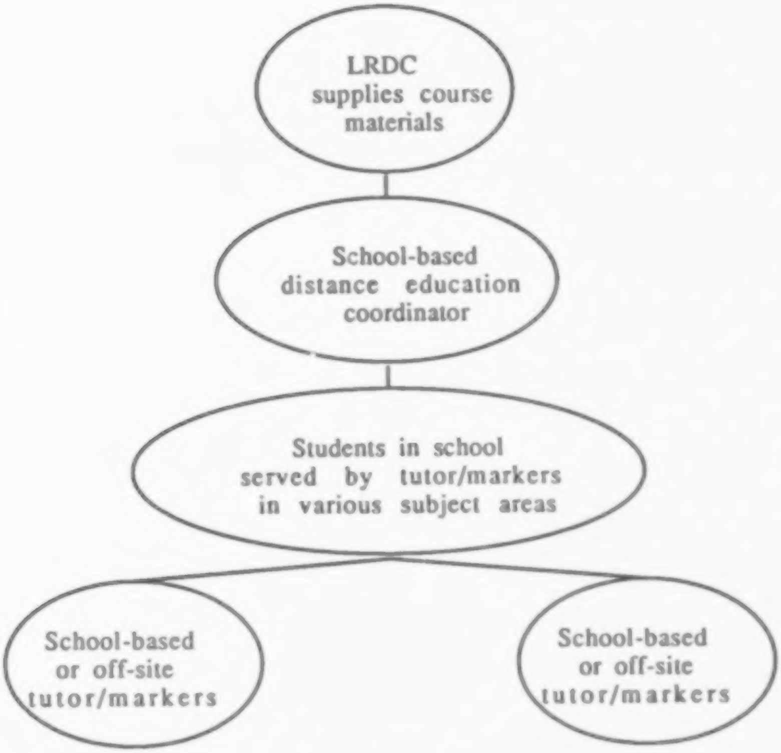
Source: Alberta Education. (1990). Distance education handbook. Edmonton, AB: Author.

The only "Computer-Based Model," currently used in Alberta is the Computer Managed Learning system (CML), and is shown in Figure 2. While other Computer Assisted Learning (CAL) or Computer Assisted Instruction (CAI) programs are available they are not used extensively for distance education in Alberta. CML is presently used for the nine senior high school mathematics courses, and according to Alberta Education (1990d) "plans are under way to develop materials and test item banks in other courses which lend themselves to such a delivery mode" (p. 10). The CML system consists of a Digital Microvax computer, a Learning Management System (LMS) program, and print materials. Students require only a small amount of time at the computer to answer questions and generate assignments after they have completed the learning activities and practice exercises in the print materials. The computer provides topic tests, marks them, records the score and details of the test, and prints out a report. According to Alberta Education the teacher's interaction may be minimal and "can be classified as one of three functions: clerical, report generation, and system management" (np. 14). However, they also suggest another arrangement which complements and accentuates the traditional teaching role. Such a situation could be a class with "a number of students in the same subject, but at different grade or achievement levels placed together under the tutelage of a teacher who is the subject matter specialist" (p. 10). This is a difficult teaching situation, but with CML the teacher is more able to assist students individually or in groups so that they may progress at their own rates.

Whether or not CML is a "legitimate" distance education mode is a contentious issue among teachers and administrators. With CML the "distance" or external tutor/marker component is absent. The other external component, workbooks which cost about $60 per set, may be replaced by reusable textbooks and a teacher providing the content and instruction. In such a case the CML system is simply and economically used as a test bank and management tool to complement traditional classroom instruction. However, the point needs to be made that, according to Alberta Education's prescription, CML satisfies the criteria for the Distance Education Grant and in the Alberta context should be accepted as a legitimate distance education mode.

Figure 3

Multi-Subject Model

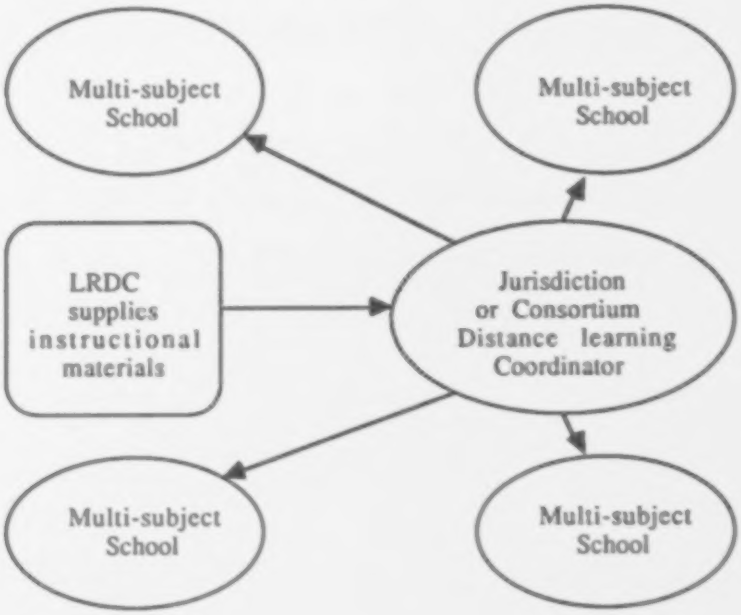

LRDC
supplies course materials
School-based distance education coordinator
Students in school served by tutor/markers in various subject areas
School-based or off-site tutor/markers
School-based or off-site tutor/markers

Source: Alberta Education. (1990). Distance education handbook. Edmonton, AB: Author.

This single school Multi-Subject Model, shown in Figure 3, usually involves a group of students who may be enrolled in a variety of distance education courses. While students work independently on course materials and submit their assignments to off-site tutor/markers, they are supervised and assisted by a teacher in a regular classroom or distance education room. According to Alberta Education (1990d), "this room may contain a variety of electronic equipment such as a facsimile machine, telephone, teleconference convenor, computers, VCR and other hardware necessary for students to work on their lessons and to transmit them to the off-site teachers" (p. 11). The off-site teachers, usually referred to as tutor/markers, working from home, another school, or even the host school, are responsible for the evaluation and instruction of students. Depending on the extent of distance education, a school may require personnel arrangements which include supervising teachers, a distance education coordinator, and possibly support staff to do routine clerical tasks, such as collect, "FAX," and distribute lessons. In this situation a school coordinator, who is not necessarily a teacher supervising a distance education class, is generally responsible for facilitating the distance education process. This involves obtaining materials, registering students, arranging for tutor/markers, establishing a system to record and report student progress, and generally overseeing the operation of distance education within the school.

Figure 4

Multi-School Model


Multi-subject School
Multi-subject School
LRDC supplies instructional materials
Jurisdiction or Consortium Distance learning Coordinator
Multi-subject School
Multi-subject School

Source: Alberta Education. (1990). Distance education handbook. Edmonton, AB: Author.

The Multi-School Model, shown in Figure 4, is an expansion of the previous model and consists of a network of multi-subject schools coordinated within a jurisdiction or consortium of jurisdictions. The organization within each of the participating schools is similar to that described for the multi-subject schools. At the school level the student needs, and the organizational roles of supervising teachers, tutor/markers, supporting staff, and school coordinators are the same. Collaboration between schools within a jurisdiction may require that a central office administrator accept the extra role of jurisdictional coordinator. When more than one jurisdiction is involved a consortium is usually formed and a part-time or full-time consortium coordinator may be appointed depending on the number of jurisdictions and schools involved in the consortium arrangement. Apart from ensuring cooperation, communication and commitment from participants at the various levels, the jurisdictional and consortium coordinators are also likely to be concerned with policy, finance, and personnel coordination at the administrative level. Alberta Education (1990d) emphasized the importance of each of the coordinators' roles at the school, jurisdiction, and consortium levels, and stated that "these contact persons are essential to ensure smooth operation and effective communication among all participants" (p. 12).

Summary of Models

Alberta Education (1990d) has developed these models through experience gained from pilot studies and more than 135 schools where distance education is now an "integral part of the whole school offering" (p. 12). While these prototypes may not suit all needs, Alberta Education stated that "probably the best advice is to look at the models described and take the parts that meet your needs, and create your own custom model" (p. 10).

In contrast to the ACS model of traditional correspondence, the latter three models advocated for Alberta schools involve more technology and people. Technology is expected to provide the dynamic interaction with content and teacher, while supervising teachers, tutor/markers, teacher advisors, coordinators, ancillary staff, and administrators are expected to provide the "human factor" so often missing in correspondence learning. However participation alone is insufficient, the quality of the human factor is also important. According to Alberta Education (1990d) the most significant component of any model is the attitude of those involved. They stated that "if the local school personnel have a positive attitude and are committed to the program and take an interest in the students' success, the students themselves will take on a positive outlook and make it work" (p. 12).

Organizational Arrangements and Responsibilities

The Provincial Government has overall authority and responsibility for education in Alberta. As part of that role the Government has provided the philosophical, political, and financial support for distance education since 1987. Alberta Education's Program Implementation Branch was given responsibility for the initial pilot studies and implementation of distance education in Alberta. Since the completion of the pilot studies the Distance Learning Centre has assumed responsibility for the further development of distance education. DLC, through its Implementation Unit, now provides assistance in terms of distance education consultation, implementation, coordination, communication, inservice, and evaluation. These services are also available to Alberta schools and jurisdictions, to some extent, from the five Regional Offices of Education.

DLC also has a mandate to develop distance education course materials for K to 12 students, and produces most of its own printed materials, and an ever increasing computer software component. While DLC supplies material directly to DLC registered correspondence students, the distance education materials are distributed to schools by the Learning Resources Distributing Centre (LRDC). Availability and delivery of materials for distance education has been a contentious issue during the implementation stage. However, this is understandable given that the demand for materials from LRDC has increased significantly since distance education funding became available for eligible schools in 1989. According to Alberta Education (1990d), "in September 1989, the LRDC received 5,849 school telephone and mail orders and shipped 371,663 units of learning resources, almost double the expected volume" (p. 7).

The decentralization and expansion of distance education has emphasized the need to share resources and expertise, and required the implementation of alternative organizational arrangements within and between jurisdictions. Cooperation between schools can usually be adapted to the existing legal and organizational framework within jurisdictions. The cooperation between a number of jurisdictions has required the creation of consortia, another level of administration. However, according to Alberta Education (1990d), "it is important to note that a consortium has no power or authority other than that which is given to it by the school jurisdictions" (p. 13). To establish working relationships among themselves, jurisdictions are advised to form legal partnerships or other acceptable legal contracts in which Alberta Education suggested the "responsibilities for the governance, financial management and day-to-day operation of the consortium should be clearly identified" (p. 13).

Irrespective of the formation of consortia and other distance education arrangements, local school boards and schools must accept the same responsibility for distance education that they have with traditional schooling. The school boards must oversee the provision of the necessary staff, space, equipment, and organizational structure so that students have "access to the same level of educational opportunity as any other student in the province" (Alberta Education, 1990d, p. 13). The school is the legal body directly responsible for both the traditional and distance education components of a student's program. The school administration and teaching staff must ensure that course material has been covered, award marks and credits, produce progress reports on a regular basis, and maintain contact with a student's parents (Alberta Education, 1990d).

As described earlier in the models of distance education, the organizational structure for distance education and regular schooling may be different. New teaching responsibilities and organizational arrangements have evolved to facilitate cooperation between the distance education "team" members both inside and outside the school. The distance education responsibilities of the tutor/marker, school coordinator, principal, superintendent, and consortium coordinator are described in detail by Alberta Education (1990d). While many of these responsibilities or functions are similar to the organization and management of any educational enterprise, it is important to note that the principal, superintendent, and possibly the school coordinator have assumed extra responsibilities with distance education. In particular, because of the nature of distance education, there is an emphasis and an increased involvement in communication and coordination in each role prescription. For example the tutor/marker is expected to communicate with students often, and in the "shortest manageable turn around time" (p. 28). The school coordinator is expected to consult, coordinate, and maintain effective communication with all distance education students and personnel at the school level. Apart from communicating a positive attitude and providing leadership, and overseeing all aspects of distance education, the principal and the superintendent are expected to maintain liaison with supporting organizational personnel. The principal's support and leadership in particular, much of which relies on effective communication, is considered critical to the success of distance education within any school.

Chapter Summary

The Alberta School Act enacted in 1988 was based on five principles: Access, equity, flexibility, responsiveness, and fiscal responsibility. These principles and demands for increased high school curricula and graduation standards influenced the evolution of distance education in Alberta. Since 1987 provincial funding has supported the implementation of distance education in an attempt to provide equitable educational opportunities for high school students, and provide courses not otherwise available by traditional delivery methods.

From pilot studies and experience gained in more than 135 schools, where distance education has been implemented, Alberta Education (1990d) has developed four models which may be adapted to the particular needs of different schools. With three of the models, technology is expected to provide the dynamic interaction between student and teacher, while supervising teachers, tutor/markers, teacher advisors, coordinators, ancillary staff, and administrators are expected to provide the "human factor" so often missing with correspondence learning.

Since the completion of the pilot studies, the Alberta Distance Learning Centre has assumed responsibility for the decentralization of distance education and has continued to provide a consultation and coordination role. However, the decentralization and expansion of distance education has emphasized the need for schools and jurisdictions to share resources and expertise, and has required the implementation of alternative organizational arrangements within and between jurisdictions. The cooperation between a number of jurisdictions has required the creation of consortia, and another level of administration which is responsible for the governance, financial management, and the day-to-day operation of the consortia. At the school level, new teaching responsibilities and organizational arrangements have evolved to facilitate cooperation between the distance education team members both inside and outside the school. These developments are described in the following case studies.

Chapter 5

CENTRAL EAST DISTANCE EDUCATION CONSORTIUM: ORGANIZATIONAL ARRANGEMENTS AND ISSUES

This case study describes the organizational arrangements implemented by the jurisdictional members of the Central East Distance Education Consortium (CEDEC) to provide distance education for senior students in small schools. It is the first of five similar case studies of three consortia and two autonomous jurisdictions. The following description is based on data from interviews of key participants in CEDEC and in nine of the seventeen schools in the consortium. The description is also supported by documentation, the researcher's observations, and guided by the two major study questions:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?
2. What are the critical issues concerned with these organizational arrangements?

The chapter is in two parts. The first and second parts, "Jurisdictional Arrangements" and "School Arrangements" address the first research question. Issues, which are the focus of the second question, are dealt with as they arise throughout the chapter.

PART 1: JURISDICTIONAL ARRANGEMENTS

This study of the jurisdictional arrangements begins with a description of the consortium context, and identification of the jurisdictions and schools involved in the consortium. These details are followed by an outline of the consortium management structure and a discussion of the issues concerned with its implementation and operation.

The key consortium roles of the consortium coordinator, jurisdictional coordinator, and the tutor-markers are described and discussed in terms of issues identified by respondents.

Consortium Context

The Central East Distance Education Consortium (CEDEC) came into operation at the beginning of the 1989-90 school year and now, in its second year, coordinates distance education in 17 schools. It was one of the first consortia to evolve from jurisdictions and schools which had not been part of the initial Alberta pilot studies of distance education. This consortium is now consolidating and improving its organizational arrangements, and building on its own experiences and trials of a difficult implementation phase in the first year.

CEDEC covers a 14,000 square kilometer triangular slice of Alberta starting 75 kilometers east of Edmonton at Ryley as the western apex, with Dewberry 130 kilometers to the north east, and Provost 180 kilometers to the south-east. These sparsely populated grain-growing prairie lands are serviced by an extensive network of paved highways and rural roads. Without snow and ice these roads are excellent but, in a sudden snow storm in autumn, the researcher realized the same roads can suddenly become extremely dangerous and frustratingly slow to travel. Given this experience, and the possibility of snow and ice and sudden snow-storms during four months of the school year, the researcher was convinced of the need for an alternative, such as distance education, to "busing" students long distances to larger high schools.

CEDEC includes seventeen schools, six jurisdictions, and Lakeland College. Sixteen of the schools, each with a high school enrolment of less than 150 students and 30 kilometers or more from a large high school, are eligible for the distance education grant. Because it has more than 150 senior students, Wainwright High School is the only school participating in the consortium not eligible for the grant. Wainwright High together with three other schools in the Wainwright Jurisdiction make up about 25% of the consortium, and as such have significantly influenced its operation. Similarly, Vermilion County with four small schools involved has also been prominent in consortium affairs, particularly in the second year of operation. The East Central Catholic Schools Association with three schools in the consortium, and fewer students than the previous two jurisdictions mentioned, has been less concerned with the politics of the consortium but more concerned with the implementation and integration of distance education in its schools. In the two schools visited by the researcher the staff demonstrated an enthusiasm for distance education and a willingness to cooperate with the consortium that was not always apparent in other schools. The County of Beaver, County of Minburn, and Provost School Division each have two schools involved, while Lakeland College at this stage has only a token involvement with none of its adult students accessing the consortium's services.

A schematic map in Figure 5 and a list of the jurisdictions and schools in Table 3 are provided for clarification. Figure 5 indicates the position of the schools within the consortium boundaries, and underlining indicates the schools surveyed for this case study. In Table 3 the schools are listed against their jurisdictions, and underlining indicates the nine schools and the five jurisdictional offices visited during the survey.

Figure 5

Map of the Central East Distance Education Consortium

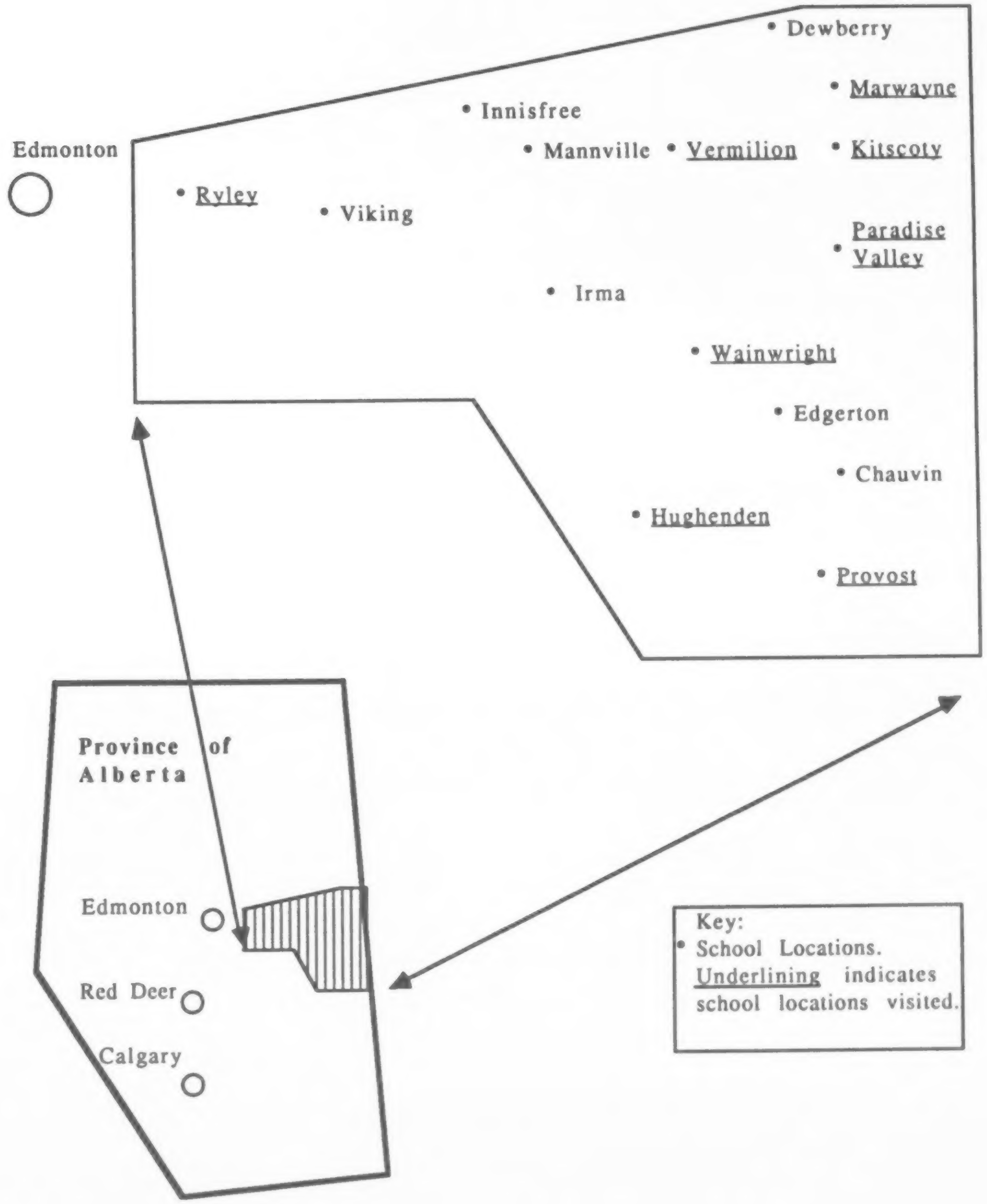

Edmonton
Dewberry
Marwayne
Innisfree
Mannville
Vermilion
Kitscoty
Ryley
Viking
Paradise Valley
Irma
Wainwright
Edgerton
Chauvin
Hughenden
Provost
Province of Alberta
Edmonton
Red Deer
Calgary
Key:
School Locations.
Underlining indicates school locations visited.

Table 3

List of Jurisdictions and Schools

Members of the Consortium	Schools
1. County of Vermilion River	*Kitscoty Junior Senior High school *Marwayne School *E.H. Walter School (Paradise Valley) Dewberry School
2. Wainwright School Division	*Wainwright High School Chauvin School Edgerton School Irma School
3. East Central Catholic Schools Association Districts 31, 49, 65, 97.	*Saint Jerome's School (Vermilion) *Saint Thomas Aquinas (Provost) Blessed Sacrament (Wainwright)
4. Provost School Division	*Provost School *Hughenden School
5. County of Beaver	*Ryley School Viking School
6. County of Minburn	Innisfree School Mannville School
7. Lakeland College	Lakeland College (Wainwright)
Six School Jurisdictions and one Community College	Seventeen Schools and one Community College

* Underlining indicates jurisdictional offices and schools visited.

Consortium Management

The CEDEC coordinator described the consortium as a means of "bringing together the people and resources of the six jurisdictions to provide a viable program," and explained that "if we go with more than one system, we're going to get specialized teaching. Whereas, if we do it [distance education] locally, teachers may end up teaching too many different things."

The Consortium Agreement (see Appendix C) formally binds this cooperative arrangement of six jurisdictions. To direct the sharing of "people and resources" among the six jurisdictions the consortium has a two-tiered decision making body made up of the "management team" and the "coordinating team." While the Consortium Agreement recognizes the Management Committee as the only executive body, in practice the Coordinating Committee does exist as the next level of management, and its actual role, as reported by respondents, reflects the duties listed in the CEDEC Policy Handbook (see Appendix D).

Consortium Agreement

According to the consortium coordinator, the central tasks of the Management and Coordinating Committees, of developing an agreement, policy, and operational arrangements acceptable to all parties, have been time consuming and difficult.

> The main thrust over the last year was coming up with a workable agreement that all parties would agree to, and a policy handbook that all parties could agree to. It was a matter of taking the information that was there, doing a draft, thinking about it, talking it over with the school boards, feeding it back into the coordinating committee, who then come up with another draft and take it back to the management committee.

After circulating a draft of the consortium agreement among school boards and consortium committees for more than a year, the agreement was finally signed on November 5, 1990. The agreement is brief and lacks important details about the actual management structure and governance. For example the Coordinating Committee, an integral part of the organization of this consortium, was not mentioned in the agreement, although this committee's responsibilities are listed in the CEDEC Policy Handbook. The agreement also lacks essential elements suggested by Alberta Education (1990), such as an indemnity clause which states that the "consortium has no power or authority other than that which is given to it by the school jurisdictions" (p. 13), and that jurisdictions must take full responsibility for the education of their students. While the CEDEC administrators may assume that such a statement is unnecessary, Alberta Education has advised jurisdictions forming consortia to form legal partnerships or other acceptable legal contracts in which the "responsibilities for the governance, financial management, and day-to-day operation of the consortium should be clearly identified" (p. 13). According to the coordinator, the consortium's administration had attempted to keep the agreement and the policy handbook as simple as possible. This view was reinforced by a superintendent, who was also a member of the Coordinating and Management Committees. In a discussion about the termination and application for membership, he explained that the CEDEC agreement was not meant to be too detailed and specific.

> We did that deliberately. We said "If you're not happy with this marriage, get out! Just get a divorce! We're not going through an elaborate court or anything like that. . . . I was involved in that discussion when we initially debated it, and that was my position exactly. My reason for that is not so much to make it easy to break out of it [the agreement], but you'll put a greater effort into it, to make it work, if you have ownership.

However it must be pointed out that a lack of detail in other basic areas in the Consortium Agreement will not necessarily promote ownership. While the agreement deals briefly with the governance of the consortium by the Management Committee, outlines the membership termination and joining arrangements, and in an addendum describes the distance education course fee structure, readers are referred to the Policy handbook for further details. According to the agreement "the Management Committee shall be guided by the operational principles set out in the policy handbook," which also provides the details of the Coordinating Committee and the "Executive Coordinator's" (consortium coordinator's) responsibilities.

Management Committee

The consortium's highest level of management, the Management Committee, consists of a school board representative and the chief executive officer--the superintendent--from each jurisdiction, plus the consortium coordinator and an Alberta Distance Learning Centre observer. This 14-member Management Committee is obligated by its agreement to meet at least once each year, but may meet more often to make decisions by majority vote on policy matters, the consortium agreement, and overall operation of the consortium. While details about the composition of the Management Committee are provided in the agreement, the role and responsibilities of this committee are listed more clearly in the CEDEC Policy Handbook which states that the management committee shall perform these tasks and operate in these ways:

> 1. Meet at least once each school year.
>
> 2. Establish and review policies governing the operation of CEDEC.
>
> 3. Prepare an annual budget for the subsequent school year which determines the rates, credits, executive coordinator's costs, and other costs to be charged to CEDEC and other users.
>
> 4. Prepare an annual report including a statement of financial transactions of CEDEC for its member jurisdictions by October 30 of the subsequent school year. This report will be both descriptive and evaluative.
>
> 5. Establish annually the fees for all CEDEC services.
>
> 6. Make annual designation of the executive coordinator [referred to in this study as the consortium coordinator].

Coordinating Committee

The Coordinating Committee is responsible for decisions affecting the day-to-day operation of distance education in the six jurisdictions. This committee consists of the consortium coordinator and a coordinator from each of the six jurisdictions, usually a superintendent or deputy superintendent who may also be a member of the management committee. According to the consortium coordinator, the purpose of this seven member committee is "to see that staffing is in place, provide workshops, seminars, evaluate the program, and deal with problems that come up over a period of time." This committee is also responsible for long-term planning and developing policy drafts for submission to the management committee. The consortium coordinator described the process as follows:

> We can't finalize anything at that level, but we can recommend to the management committee. One thing that we will be doing, and we haven't done anything like this yet, but we will be working at planning budgets. That will be done at the Coordinating Committee and recommended to the Management Committee.

The Coordinating Committee's responsibilities are listed in the CEDEC Policy Handbook which states that the coordinating committee shall:

1. Recommend policy to the management committee.
2. Within the scope of approved policies, develop and maintain procedures for long-term and day-to-day operation of CEDEC.
3. Meet at least bi-monthly during the school year.
4. Be chaired by the executive coordinator [consortium coordinator].
5. Maintain communication among members of CEDEC to facilitate day-to-day operations.
6. Monitor and evaluate program delivery.
7. Maintain records.

While six of these items accurately describe the current role and operation of the coordinating committee, item four does not coincide with the present consortium coordinator's job description, nor does it agree with current practice. According to one of the members of the coordinating committee, subsequent meetings are held at different venues and chaired by the local jurisdictional coordinator. According to the consortium coordinator's role description he acts "as the recording secretary for both the CEDEC Coordinating Committee and the CEDEC Management Committee," and consequently has little time or opportunity to act as the chairperson for these meetings.

Financial Arrangements and Tutor-marker Services

The main function of CEDEC is the coordination of buying and selling of tutor-marker services among the participating jurisdictions, with the aim to "balance" each jurisdiction's distance education income and costs. The idea is to match the income derived from each jurisdiction's quota of tutor-markers with the cost of the course credits taken by their students.

The fee for the tutor-marker services, listed in the agreement, is $100 per credit for consortium members, plus 10% of these fees for services provided by the consortium. According to the consortium coordinator, the 10% surcharge is used for the consortium's operating expenses such as telephone, fax, secretarial costs, travel expenses, and the consortium's contribution to his salary.

The consortium coordinator is employed, supervised, and paid by his own jurisdiction, and receives an "honorarium" from the consortium. None of these arrangements are stated in the agreement, but according to the coordinator, "I was employed [by the consortium] as a one-quarter-time coordinator, but, I'm not tied to one quarter; they did leave a little leeway there, depending on registrations." For the remainder of his working hours the consortium coordinator was employed as a coordinator and tutor-marker for his own jurisdiction. Although it was too early to tell whether the surcharge on course fees would cover the consortium's costs and the coordinator's one quarter salary, he expressed faith and optimism in the system when he stated, "I haven't ironed out a contract yet!" This was five months after the coordinator had been appointed in June 1990. The fluidity of the situation appeared to be appreciated by those directly concerned, and according to the coordinator his salary would depend on the success of the program and the fees collected.

Although payment of tutor-markers and their conditions of employment were considered jurisdictional matters, the consortium coordinator was responsible for the buying and selling of tutor-marker services and identifying the need for particular tutor-markers. He explained that

> We have a preliminary [student] registration in spring. Based on that preliminary registration, we try to forecast what we'll need. When the consortium started up, different jurisdictions promised that they would do certain things. Our jurisdiction promised they would look after the business education end of it, and other jurisdictions promised to look after social studies and the humanities, others for example, promised to look after mathematics.

Each jurisdiction was encouraged to provide sufficient tutor-marker services to cover the costs of their own students' course credits. For example, if a jurisdiction required a total of 500 credits per semester to be marked for their students then one tutor-marker, or a number of individuals whose fractional workloads add up to one full-time tutor-marker, could be employed by that jurisdiction. Each jurisdiction looked after one or more subject areas and employed specialist teachers as tutor-markers in those subject areas, and shared the tutor-markers among the consortium schools. These arrangements were described by the consortium coordinator as follows:

> The tutor-markers are hired by the individual jurisdictions. Each jurisdiction has the option to provide a tutor-marker, or more, as the case may be. They don't have to supply one, but we encourage them to, and then they hire their tutor-markers. I'll allocate an assignment to them, try to work in consultation with the superintendent or the deputy-superintendent, to work out what their teacher should have, try to get that load up to the best I can, and then the jurisdiction works out a contract with the teacher.

If each jurisdiction employed sufficient tutor-markers to cover their students' needs, they would be able to balance the income from their tutor-marker services with the costs for services for their own students. Of course, the "balancing" of jurisdictional costs within the consortium does not always work out exactly, but the differences are calculated by the coordinator, and paid or payment is received by the various jurisdictions at the end of each semester or school year. One superintendent described the situation as follows:

> You could think of it as buying services from each other, but instead of buying you have a consortium with a leader [the coordinator] who ensures that the trade-offs balance out, so that you are marking about as many credits as you are receiving instruction for. The consortium charges a certain amount per credit and uses this money to help finance the whole [consortium] system.

A jurisdiction receives $100 from the consortium for each credit, tutor-marked by that jurisdiction, and pays the tutor-marker according to the "grid" or substitute pay scales. The consortium coordinator stated that, "the only 'rule' we have with respect to the working conditions and payment of tutor-markers is that we recommend 500 credits as a full-time load." This is an important point and it must be stressed that, according to the consortium coordinator, "500 credits per year is a full-time load for a tutor-marker." The coordinator explained that while a five credit diploma course is worth five credits of tutor-marking time, the tutor-marking system might be easier to explain in terms of dollars.

> If you take 500 credits and charge $100 dollars per credit, that's $50,000. So if you have a teacher working full-time marking, and let's assume that the teacher is marking all outside courses other than her own jurisdiction, she's going to bring in $50,000 to that board for that service fee. So in a sense, if you hire a tutor-marker, they're going to pay most of their salary themselves through fees.

The consortium coordinator also explained that a load of only 500 credits per year would allow a tutor-marker time to tutor students rather than work just as a "marking machine." While this idea has considerable merit, the 500 credit load advocated by the coordinator is significantly lower than the 1000 credit full time workload expected of tutor-markers in other consortia and, in practice, throughout this consortium.

Issues

Tutor-marker workload. A tutor-marker's workload is often compared to a classroom teacher's assignment without preparation time, and may be calculated as four, five-credit semester classes of 25 students, (4 x 5 x 25 = 500) which equals 500 credits per semester, or a total of 1000 credits per year. For courses taken over the full school year this calculation becomes eight, five credit classes of 25 students, (8 x 5 x 25 = 1000) and once again equates to 1000 credits of work per year.

As the coordinator explained, 500 credits per year is the suggested workload for a tutor-marker and the financial arrangements in this consortium are based on that premise. However, according to the coordinator's report of April 12, 1991, which listed the tutor-markers and their credit loads, and according to information from two principals and a deputy superintendent, 500 credits per semester was more likely to be the accepted norm for a full-time tutor-marker's workload in this consortium, but this concept requires further qualification. If a tutor-marker dealt with semester courses only, then that tutor-marker could complete a workload of 1000 credits in one year. If a tutor-marker dealt with full-year courses only, then that tutor-marker could be registered as having a 500 credit load at any one time and complete only 500 credits in one year. To complicate the matter even further, some schools in the consortium were on a semester system and others operated on a full year system, consequently tutor-markers' credit loads might include a combination of half year and full year courses. Because of this combination it is often difficult to estimate a tutor-marker's load without a considerable amount of detailed information which was not available to the researcher, but it appeared that a full-time tutor-marker's workload was closer to 1000 credits per year, rather than the 500 credits per year which the coordinator was advocating.

The tutor-markers' workload has been dealt with in such detail because of the possible financial implications for the consortium. For example, if a tutor-marker has marked an average of 500 credits per semester, for a fee of $100 per credit, the tutor-marker could actually bring in $100,000 each year for a school board. This amount would be approximately double the yearly salary for a senior teacher, and a jurisdiction could hypothetically make a $50,000 profit at the expense of other jurisdictions. Several jurisdictional and school administrators acknowledged that they were aware of this profit-making potential, although they were not taking advantage of the situation. However, the situation exists whereby a jurisdiction or school could make a large profit through the employment of one full time tutor-marker who is asked to mark 500 credits in each semester.

Student registration. The employment of tutor-markers was initially based on student registrations taken in June of the previous school year. The consortium coordinator was asked, "Do these arrangements usually work?" and replied, "It does if everybody does their share. When I left last year I thought I had all the areas covered. Then when I came back in September, I had two major curves thrown at me." The first "major curve" concerned the student registration system, and the second concerned cooperation between one jurisdiction and the consortium. The coordinator explained that both of these issues had financial repercussions for the consortium. He addressed the first issue by stating that,

> Student registration is one issue that we have to resolve. Our present policy--it's not a written policy, but we've agreed to it in principle as a group--is that a student is not officially registered until they submit the first lesson. I realize now that doesn't work, because I go out and hire a teacher based on paper registrations that may not firm up. For example, I had five withdrawals this week, all in one subject area. It happened to be the teacher that I had just finished hiring. I lost fifteen credits! Now, I know that jurisdiction has applied for the Grant, because it was after the deadline that they withdrew. The way our policy is, students are not officially registered until they submit their first lesson. Well they're not going to submit a first lesson now, so I'm kind of caught in between.

While the school was able to make a claim on the distance education grant for five students, who subsequently had withdrawn from their courses, the consortium received no funds for the tutor-marker services contracted at the beginning of the school year, about six weeks earlier than the October 18 closing date for the grant. The consortium coordinator suggested that, to solve this problem without depending on the good-will of jurisdictions, better coordination through regulation was required. He suggested that the registration of students, the closing date for the grant, and contracting of tutor-markers may need to be better coordinated and regulated by operational guidelines and financial agreements.

Jurisdictional cooperation. The second problem the consortium coordinator spoke about concerned the need for jurisdictional cooperation to "balance" the credits sold with the number of credits bought by each jurisdiction. This buying and selling focus of the consortium was based on an informal principle that each jurisdiction would supply tutor-marker services in one subject area, and that these services would be about equal to the number of distance education credits taken by the students in that jurisdiction. Unfortunately, such an important aspect of this operation was not included in the Consortium Agreement or the Policy handbook, and the application of this principle depends on each jurisdiction's interpretation of this principle and willingness to cooperate to make it work. Compounded with the $100 fee structure, such a situation has the potential for causing problems. According to the consortium coordinator, such a problem has already arisen.

> I had a request last spring from the ____board saying that they wanted three hundred and fifty credits for one teacher because she was tenured and they wanted to keep her on staff. . . . I agreed with it in principle because they were going to buy a large number of credits. This fall, when they came back, what they bought was way down and they had thrown a couple of other teachers' names into the ring as well.

The consortium management refused to accommodate the jurisdiction's requests to arbitrarily engage more tutor-markers and reorganize existing consortium arrangements to solve this jurisdiction's staffing problems at the beginning of the school year when most staffing arrangements had been finalized. The coordinator explained that as a result of the conflict,

> This jurisdiction pulled out of CEDEC. They have never officially told us; they're still buying some services from us, but very, very few. I think they're buying less than a hundred credits, and they have hired local teachers within their school board to do all of their tutor-marking for the majority of their subjects.

The coordinator explained that this jurisdiction was the one exception to the consortium's sharing arrangement, and had set up "a consortium within the consortium" by using its own specialist teachers within its four schools as tutor-markers. But, while this jurisdiction was buying only a limited amount of services from the consortium, it was selling more than four times as much in tutor-marker services to the consortium. According to the CEDEC coordinator's report of April 12, 1991, this jurisdiction was buying 98 credits but was selling 576 tutor-marked credits to the consortium. This situation provided the jurisdiction with a net gain of 478 credits and, at $100 per credit, a possible net "profit" in one semester of $47,800. A profit which could have been even greater if this jurisdiction had fulfilled its obligations to supply its original quota of specialist teachers and tutor-marker services, part of which had been withdrawn because of the disagreement with the consortium. Apparently other jurisdictions were only too willing to supply the necessary services at $100 per credit, but not without some criticism of the delinquent jurisdiction. A school coordinator commented that,

> Our consortium was promised a tutor-marker in industrial education who was supposed to come from another jurisdiction. When push came to shove, his board actually refused to free him up to take on the industrial education, which was okay, but I think maybe there has to be somewhat more of a commitment from some of the boards that distance ed. is a valid program and that certain commitments have to be made in terms of staffing towards it.

It would not be fair to conclude that a lack of cooperation with the tutor-marker arrangements was an extensive and characteristic problem throughout the consortium, but it must be said that the existing arrangements have the potential to cause more problems. Only one jurisdiction had partially withdrawn its cooperation from the consortium, although officially it was still part of the consortium according to the agreement formally signed on November 5, 1990. This jurisdiction had decided to use its own teachers to tutor-mark most of its students' distance education courses, but at the same time it appears to have made a substantial profit from selling tutor-marker services to the consortium. Officially there is nothing wrong with this situation because there is no official policy to bind jurisdictions to the consortium's unofficial principle of balancing the buying and selling of credits. Five out of the six jurisdictions were cooperating and working reasonably well with these arrangements, but unless this essential concept of sharing is included in the Consortium Agreement or associated policy the potential exists for more disharmony in the future.

Policy

According to the consortium coordinator, apart from the partnership agreement the management committee has not "moved too far with policy at this stage. . . . The only one that we've worked on in any detail is a set of guidelines for myself, because I said I would not operate unless I had a set of guidelines." The difficulties of formulating policies such as a student evaluation policy for traditionally autonomous jurisdictions were described by the consortium coordinator as follows:

> You have to dovetail it in with all the jurisdictions. Every jurisdiction has their own policy on student evaluation, and for the consortium to come up with an overall policy is very difficult. . . . You don't want to end up with something that's a contradiction within a jurisdiction. Probably the most difficult task we'll have is coming up with a policy on student evaluation that will satisfy everyone. . . . We've been gathering data for about a year. . . . We haven't put anything in writing, but we have to come up with something by the next management committee meeting, so it's one of the priorities over the next couple of months."

Irrespective of the consortium coordinator's comment that "we haven't moved too far with policy at this stage," it must be understood that policy guidelines at least in draft form do exist. The 1989 draft of the CEDEC Policy Handbook was provided by a superintendent, who was also a member of the Coordinating and Management Committees. Although this Policy Handbook has not been officially accepted by the consortium, the superintendent suggested that it was generally used as a guide throughout the consortium. In practice, the organizational arrangements seemed to agree with what is stated in the Policy Handbook, and the arrangements appeared to have the tacit approval of most members.

The consortium coordinator expressed the view that the Management and Coordinating Committees' attitudes towards developing and formalizing policy were extremely cautious. He stated, "We're not going to rush into things; we are going to bounce it around and see how it's going to work, but generally speaking we don't have anything down [officially]." This approach to formalizing policy was described by a member of the Coordinating Committee in terms of the democratic philosophy underlying the management of the consortium.

> It's a group of equals meeting, and the decisions are made by consensus [sic]. In other words, if you propose a motion and you can sell the other members of the consortium, who are fully independent, on the idea and on the need and so on, then

> you get approval for it through a vote. . . . a majority vote. There's one vote for each jurisdiction.
>
> The vision is that the policy flows up from the needs of our in-school people--the in-school coordinator, the in-school teacher-advisors, the tutor-markers, and so on--it flows up to my level. Each jurisdiction has somebody in the coordinating committee. We draft the policy, we formulate it, we give it to the management committee for their approval. Of course, we can also initiate policy if we see the need, and then, of course, it goes down and up. Our primary hope is that it will flow up from the needs of the actual people who are at the grassroots.

Issues

Autonomy. The problem with this consortium may lie with this vision of a democratic decision-making structure; a vision not shared and understood by some of the corporate members who are otherwise committed to autonomy. In a recent study of the formation of this consortium, Gonnet (1991) wrote that

> Autonomy was a very important principle to the members of CEDEC. Efforts to preserve local autonomy appeared in the Senior Management Committee meetings. Members of the Senior Management Steering Committee were very protective when concepts or issues were discussed that might reduce local control. The first example of the concern for local autonomy appeared before the consortium was formed. The Wainwright School Division proposed to the group that one school jurisdiction could act as an agent board brokering courses to the rest of the members. The concept received no support whatsoever. A second proposal to form a consortium received cool approval initially. Issues relating to participation in the decision making process that would ensure flexibility and the opportunity to retain local control had to be addressed and well understood before the establishment of CEDEC proceeded. The length of time required to address these fundamental issues is evidence of the importance of local autonomy for the jurisdictions. Negotiations carried on for almost two years. The structure wasn't really formalized until the agreement was signed[3] in June of 1990. The fact that only five of the original thirteen jurisdictions proceeded also supports this statement. When a superintendent from one of the jurisdictions was asked why they chose to withdraw he stated "We felt that we would lose control over the education of our students in such a large organization." (p. 26)

Lack of policy and procedural details. To placate those who feared the consortium would take power away from the jurisdictions, the CEDEC committees sought to develop a democratic decision making structure, but the deference and consideration given to the autonomy of jurisdictions has obviously hindered the development of operational policy and procedures. Given this delay during the early and critical stages of implementation, the lack of policy and procedural details may be understandable, but as one principal related:

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[3] The document signed in June, 1990 was an interim agreement. The actual Consortium Agreement was not signed until November 5, 1990.

> I think this was whipped into being fairly thoughtlessly, or at least not with a lot of lead time and preparation. . . . As far as I know it's pretty well sorted itself out. I would think this year is probably better than last year. . . . I don't think we understood what was involved or how it should work, how it would pay for itself or be paid for, and how much work would be involved for whoever.

At least one principal believed that from the beginning there should have been an established set of policies and operational procedures, and that this was the most critical issue with the organization and management of the consortium.

> I don't think our consortium got off on the right foot. It was too loose; the arrangements were too loose initially. . . . All the i's weren't dotted and the t's weren't crossed. . . and I don't know if there has been anything in writing where you could really say, "This is the bible."

A deputy superintendent suggested that the looseness of the consortium's organization has caused a number of problems.

> Last year the consortium had difficulties. . . . The counties ran their own show, and the consortium kind of pieced things together rather than have a policy and suggesting policy to all its members. And a few jurisdictions went off in areas like adult education without realizing they wouldn't get funding for these people. That's just one example. They lost thousands of dollars on distance education and of course it painted a negative image. . . . But they [the coordinating committee] are now really working hard on developing policy and I think that the consortium is starting to fill the role it was intended to fill.

Another respondent claimed that the most important issue is still a lack of policy. The respondent commented that, "they do not have well-defined policy statements on distance education. . . . There are no policy statements related to staffing, related to role expectations, related to planning, related to organizational structure, related to finance, related to anything." This respondent conceded that "it's a slow process that's gradually working itself out," but still graded the consortium management as "very laissez-faire. . . I wouldn't rate it as being effective. I think there are issues they have not dealt with in terms of walking on new ground."

Other respondents expressed their tolerance for this relatively new organization and its slow development of policy and structure. Generally the improved management of the consortium and the gradual development of clearer policy and operational guidelines in this second year have been appreciated by most participants, and even its strongest critic reluctantly admitted that "this year is probably better than last year."

Consortium politics. One respondent suggested that consortium politics may have distracted the consortium executives from the "administrivia" of policy and planning:

> I think what happened, there were various boards vying for the leadership role, to be front and centre and the balance of power has shifted from year to year. . . . Wainwright more or less took it for the first year. . . . This year the power has shifted over to the County of Vermilion River. Wainwright has pulled in its horns, so they've lost it, for a variety of reasons, one was an economic one. It cost them a lot of money [last year] that should have been shared by the consortium. The reason that things transpired the way they did was a lack of planning on behalf of all the boards as to how they were going to implement the changes.

However, this "lack of planning" appeared to be only part of the problem. One respondent suggested that there was still a lack of cooperation and understanding of how this corporate structure should work.

> There's a real power struggle going on between jurisdictions, and I'm not sure yet whether boards are going to be able to work cooperatively together. . . . They see it as a threat to their own little empires. There has to be a change in [consortium] philosophy. I personally believe that an agent-board approach appears to be the most successful, where one board says, "All right, we'll act as the agent-board for this term," and give them a term, and rotate the agent-board around. The agent-board assumes all the responsibility for distance education, and you just buy into it and pay. They set the directions and the goals.

Because of the autonomous nature of the school jurisdictions involved, the suggested agent board may not have any more success than the present administration and structure. According to the same respondent, who suggested control through an agent board,

> If we are going to work within the system, the hardest thing to accommodate is to work with the other school divisions and the consortium. They don't have the same future vision that we do. We're ready to adapt but we're being held back.

A deputy superintendent commented that the "biggest issue," with respect to the consortium, is whether "counties and other systems believe in the team approach."

Consortium Coordinator's Role

The daily management of the consortium in this second year is now the responsibility of a quarter-time executive coordinator, who is also employed by his jurisdiction in two other complementary but demanding roles. The coordinator explained, "I'm the coordinator for the County of Vermilion River, I'm a tutor-marker for the consortium, and I'm the coordinator for the consortium as well." The consortium coordinator's responsibilities were approved by the Management Committee on April 12, 1991, and are listed as follows:

1. Arrange with participating boards for the employment of distance education teachers.
2. Arrange or conduct orientation, in-service, and information dissemination with respect to distance education in the consortium.
3. Collect and amalgamate all school lists of courses and student enrolments.
4. Coordinate research initiatives, evaluation activities, visiting groups, etc.
5. Respond to and assist all school staff and distance education teachers, as necessary.
6. Develop, for consideration of the Management Committee, the Consortium budget.
7. Report to the Management Committee to provide information and to receive direction.
8. Act as a recording secretary for both the CEDEC Coordinating Committee and the CEDEC Management Committee.
9. Attend on behalf of the CEDEC distance education functions as are appropriate to the needs and interests of the Consortium.

This role prescription does not include the executive and leadership functions of developing and maintaining cooperation, commitment, and communication. The routine tasks of overseeing the consortium's distance education program are listed, but are insufficient to describe the coordinator's actual role. For example, the consortium coordinator suggested that part of his role was entrepreneurial, and a large part of his consortium work at this stage was to "sell" this innovation. It must be emphasized that interorganizational collaboration through the consortium is a relatively new and radical concept for its traditionally independent members. The coordinator was aware of the need to educate skeptical jurisdictional boards and administrators about the benefits of distance education and the consortium concept, and commented, "I think that if I can prove to them over the next year that it's viable, then I'll have somebody who will listen to me, but this year they wanted to wait and see."

Proving the viability of this innovation depended to a large extent on the coordinator balancing the budget and the priorities of the jurisdictions with the distance education needs of students. A deputy superintendent commented that, "financially we're trying to make it pay for itself and I believe our coordinator has done an excellent job in that area. He's really kept the board informed, and they understand, and that's one reason they are supporting it very much." The coordinator suggested that balancing the budget was the best way of gaining support.

> The local politician wants to see a balanced budget. If he's spending four thousand dollars for services he wants to be able to sell four thousand dollars of services so it doesn't cost him anything. If you have a situation where there is a deficit of eight thousand dollars, even though it may not mean that, they read it as costing them eight thousand dollars. They may be covered with a grant, but they don't see it that way.

Although the coordinator was reluctant to admit that the amount of work he was doing was excessive, it should have been addressed by those supervising this position. However, the issue to be considered here is the small amount of time allocated to the consortium coordinator role. The other issue discussed below, concerns the coordinator's leadership.

Issues

Time. The quarter-time consortium coordinator was also the half-time coordinator for the County of Vermilion River, and a tutor-marker of 470 credits, which was a full-time workload in itself. When asked, "Do you have enough time for all three jobs?" the coordinator replied, "I make time. . . . I try to do most of the tutor-marking on site, so that I can make contact with the students. I try to do all the jurisdictional work on site also, but I do most of the other work, or a lot of it, after hours." The coordinator's supervising deputy superintendent acknowledged this demanding workload and showed concern that "he's doing more than we should expect," but offered no alternative. The coordinator was doing what could be considered a full-time tutor-marker load of 470 credits in order to make the system in his jurisdiction and consortium work after one jurisdiction had withdrawn some of their tutor-markers and support. The coordinator felt he had no other option than to take on the extra work himself. However he reluctantly admitted that the consortium coordinator's role alone is a full-time job, and stated that "I think it is, and a lot of people do. To do the job effectively you'd need more time."

The point must be made that at this early stage of implementation this consortium should, and could afford to, employ a coordinator for more than a quarter time. According to the coordinator's report of April 12, 1991, the consortium provided close to 5000 course credits throughout the year. At $100 per credit the consortium has become an educational enterprise with a "turnover" of half a million dollars. The consortium appears to be large enough to require more than a quarter time coordinator, and with the 10% levy on course fees was expected to bring in almost $50,000 in one year for consortium coordination and costs. While this amount was not enough to pay for a full time coordinator and costs, with an adjustment to the fee structure and surcharge the income could be expected to cover a half-time or even a three-quarter time coordinator's salary and consortium costs.

Leadership. Many respondents directly and indirectly commented on the consortium coordinator's "high profile" leadership role. The coordinator's leadership role was viewed by respondents in classic terms of "structure" and "consideration."

Summarizing the work of several organizational theorists, Owens (1971) suggested that leadership could be classified under two dimensions; structure and consideration.

> Structure includes behavior in which the supervisor organizes and defines group activities and his relation to the group. Thus, he defines the role he expects each member to assume, assigns tasks, plans ahead, establishes ways of getting things done, and pushes for production.
>
> Consideration includes indicating mutual trust, respect, and a certain warmth and rapport between the supervisor and his group. . . . This dimension appears to emphasize a deeper concern for group members' needs and includes such behavior as allowing subordinates more participation in decision making and encouraging more two-way communication. (p. 121).

The "structural" aspects of the consortium coordinator's role concerned policy development, student registration, and tutor-marker employment and deployment. Although the coordinator was involved in these activities, he was not solely responsible for them, and did not make the final decisions. According to a principal these structural aspects were the source of some discontent among participants in the consortium and commented that with the "individual that's in the position. . . I don't think we have any leadership." This principal viewed the coordinator's leadership role in terms of structure only. He judged the consortium coordinator's lack of effect on the consortium's operation in terms of the development of policy and operational procedures, and his inability to initiate a more satisfactory consortium structure. But to be fair, it must be understood that the consortium structure and much of the present policy and operation were the responsibility of previous Management and Coordinating Committees during the past two years. The consortium structure and operational procedure were established before the present coordinator assumed his position, and at the time of this survey the coordinator had been appointed to his quarter-time position for only five months, half of which were Summer school holidays.

Apart from the one dissenting comment, other respondents were generous with their praise of the coordinator's leadership in terms of "consideration." A deputy-superintendent stated that the coordinator had been "really helpful in three areas" described as counselling students, advising tutor-markers, and working with administrators and teachers. According to an assistant principal: "I probably can't say enough good things about [the coordinator]. . . . If I have a problem with distance education that I can't solve. . . he will get a solution for me. He's flexible; he'll jump at new things." A school coordinator acknowledged the importance of the consortium coordinator's leadership and freely expressed praise and appreciation.

> Oh, Lord, yes! You've got to have that coordinator, you've got to have the troubleshooter, you've got to have the person on the front line. You can have all those committees out there saying, "We're going to deliver this way," and "Watch those phone bills," and all that sort of stuff, but somebody's got to do the footwork, and I find. . . he's responsive, cooperative, professional, knowledgeable, and warm, and that really, really helps. He's the type of guy that, at this particular point in time, is good in that position.

An assistant principal expressed similar views, but in a more subdued style.

> I think [the consortium coordinator] makes the consortium sink or swim, I really do. This is his first year with it. He's committed to distance education; he really sees some strong potential in it, and he's working hard to make it work. I just have to applaud what he's doing. He's making my job here in the school much easier.

A deputy-superintendent appropriately summed up the importance and the quality of this leadership role:

> Without the coordinator I really don't think we would be able to function as efficiently as we do. I think the fellow that was selected for this year is doing an excellent job in his role. He's certainly very conscientious and very efficient, and without him I would feel that the consortium wouldn't operate as smoothly.

Jurisdictional Coordinator's Role

The coordinator for each jurisdiction is the link between the local school system and the consortium, but the CEDEC jurisdictional coordinators were also seen as the champions of their jurisdiction's autonomy and independence, and as part of the Coordinating Committee, central figures in CEDEC's management. One superintendent described the consortium as a series of independent "cells" or jurisdictions which set up their own distance education arrangements and deal with the "administrivia" within their own jurisdiction. The cells are then brought together to form the consortium by the jurisdictional coordinators, through the Coordinating Committee. However, it appeared that the jurisdictional coordinator's main role, as a central figure in CEDEC's management and decision making process, was to defend the jurisdiction's autonomy and independence.

The Coordinating Committee included the consortium coordinator and five other jurisdictional coordinators, who were either superintendents or other designated central office administrators with "a good deal of expertise and a good deal of authority." According to one superintendent, the jurisdictional coordinators are "close to the top of the bureaucratic pyramid, they know what's going on in their school systems and they don't have to go through a lot of channels to get things done." The superintendent also argued that the coordinating committee and CEDEC would not work as well if school personnel, such as principals or teachers, were designated as the coordinators; "it would have to be someone from central office."

The jurisdictional coordinator's responsibilities briefly defined in the 1989 draft of the CEDEC Policy Handbook accurately define the actual role as reported by respondents. The role is stated as follows:

1. Identifying distance education schools within the jurisdiction.
2. Consulting with principals regarding the funding, equipping, staffing, credits offered, number of students on the distance education program etc.
3. Representing the jurisdiction at the DE consortium meetings [coordinating committee meetings] as applicable.

Issues

Partisan interests. A deputy superintendent stated that the jurisdictional coordinator was "charged with the responsibility of ensuring that distance education is put to proper advantage for our jurisdiction's students." This role was carried through to the Coordinating Committee where the partisan interests of each "cell" or "representing the jurisdiction" appeared to be more important than the efficient operation of the consortium.

Daily decision-making and policy initiation by the consortium coordinator seemed to be restricted by the constant need to defer to the Coordinating Committee and the jurisdictional coordinators, and their inability to formulate and implement policy.

Time. Commenting on the jurisdictional coordinator's role, a superintendent suggested that it meant extra work for busy people who may not have enough time to do the job efficiently.

> Distance education is, maybe, five percent of my job, and I don't work at it nearly as much as I should to really understand and be proficient in its management. . . . I just haven't had the time to do any research on any background in this, which would feed back into the consortium and make that more efficient.

Leadership. A school coordinator suggested that the potential leadership role of the jurisdictional coordinator was an issue which had been overlooked in some jurisdictions. The school coordinator commented that the leadership of the local superintendent/jurisdictional coordinator had a great deal to do with the success of distance education in his school.

> I think that one reason we've been successful is because of our superintendent. He's been involved since day one, and he's on the CEDEC coordinating committee, so we get first hand information right away. As soon as a decision is made or something is going to happen we're consulted. Whereas the fellows across the street [another distance education school] weren't really that excited about it, and they were hearing everything second-hand.

Tutor-Marker Arrangements and Role

Apart from the Wainwright School Division's internal arrangements, there were 14 teachers employed as tutor-markers throughout the consortium. Demographically they varied greatly and included a range of individuals from first year teachers to retired teachers. Some were part-time, and some were full time; some worked in their homes, and others worked in schools. Usually tutor-markers were not supplied with their own fax machine, but were able to use their host school's facilities. While some of the tutor-markers employed in the schools were scheduled to concurrently supervise students in a classroom and be a tutor-marker for external students, others were in a position to work at one task at a time. There appeared to be as many variations with these arrangements as there were tutor-markers. The arrangements not only allowed a great deal of flexibility with the employment of tutor-markers, but provided jurisdictions with considerable flexibility in the deployment and utilization of school staff, who may not have a full teaching load, as tutor-markers.

According to the 1989 draft of the CEDEC Policy Handbook, which once again reflects what is actually happening in this consortium, the tutor-markers' responsibilities included marking lessons and examinations, and tutoring by "contacting students individually, or teleconferencing or computer conferencing with a group of students." The tutor markers are expected to mark a student's work or respond to student inquiries in the "shortest manageable turn-around time," and if possible within 36 hours. Apart from the usual teaching duties of tutoring, marking, recording, and developing course materials, tutor-markers are also encouraged to experiment "with new technologies to determine their utility for delivery of distance education."

Issues

Working conditions. An important issue highlighted by several respondents concerned the tutor-marker's "working conditions," which involved three related sub-issues; the credit load, tutor-marker arrangements within schools, and payment of tutor-markers. As noted earlier, the consortium coordinator stated that, "the only 'rule' we [the consortium] have is that we recommend five hundred credits as a full-time load." While two senior administrators suggested that 400 credits might be a reasonable load for a tutor marker, one also suggested that 400 credits may be too high and not realistic in terms of different subjects. While a tutor-marker might easily cope with 500 credits of mathematics or Mechanics 12 marking and tutoring, subjects such as English and social science require much more time to mark and tutor. One deputy superintendent commented that "I just feel that with 500 credits--depending on the variety of credits, and the number of three credit courses--the amount of paperwork is just astronomical and it's so much a tutor-marker can't keep up with it."

The work-loads expected of teacher-tutor-markers employed within some schools is another problem. While 500 credits per semester appeared to be a heavy load and a full time task for a teacher without extra duties, one teacher was required to tutor-mark 550 credits in a total of 22 courses, and at the same time supervised distance education students in a classroom during the day. A similar situation occurred at another school, where a half-time teacher, was expected to tutor-mark 180 credits, and at the same time coordinate and supervise about 40 students in the distance education program during the half day spent at the school. According to the principal this tutor-marker/coordinator was under tremendous stress. These types of arrangements were not uncommon throughout the consortium, and administrators either did not realize that tutor-marking is a demanding role in itself, or they were taking advantage of an ill-defined and an unregulated situation.

Tutor-marker payment or salaries for these credit loads and working conditions also appeared to be ill-defined. A deputy superintendent suggested that, because tutor-markers worked across jurisdictional boundaries, and because it is an area that is still relatively unknown, "there are some distance education decisions that have to be made provincially." The deputy superintendent added that there should be provincial guidelines for the work and payment of tutor-markers. A representative of the Alberta Teachers' Association (ATA) also acknowledged this problem, but at this stage saw it as a jurisdictional issue even though there was such disparity in work-loads, conditions and salaries. The ATA representative commented that, across the province, tutor-markers' work-loads varied considerably, demands placed upon teacher/tutor-markers working in schools ranged from fair and reasonable to extremely unfair and unrealistic, and salaries for similar work ranged from normal teacher rates to the lower substitute teacher or casual rates. So far the ATA's response to this issue appears to have been limited to the following resolution at the 1990 Annual Conference:

> The Alberta Teachers' Association advocates that school boards recognize that the nature of a distance education program imposes its own set of unique responsibilities on teachers which must be recognized in the computation of their workload. (p. 10)

Working relationships with students. Another issue concerned the "working relationships" of tutor-markers with students. One principal explained that,

> It's basically an electronic relationship. Usually there's a picture and a little blurb that comes along, with a telephone number. Some of the tutor-markers make a point, on a regular basis--once every three weeks or so--of either phoning the student or having the student phone them. . . . [But], the amount of time in terms of information-exchange time that we would have, I would be surprised if there was more than one percent of voice communication, of direct voice communication between student and tutor-marker.

Aspects of the tutor-markers' evolving role and the importance of facilitating communication with students was described by a tutor-marker as follows:

> In my role as a tutor-marker, I'm offering instruction to kids that are very, very remote, and there are a lot of implications when you start doing that kind of thing: How do you best help these students learn? Very often simply a comment on a piece of paper faxed to a kid is inappropriate. I guess one thing it's done is made me look at new strategies in terms of assisting learning.
>
> I think very often as tutor-markers we have to be aware that we're dealing with fairly low-ability kids in many of the courses. I think it's incumbent upon us to do certain things to help these kids succeed. Maybe before you give an exam fax the student some kind of exam outline and so forth. They're not really big deals, but they are! They're the kind of things that if you're teaching in a classroom, you do almost without thinking about it, but somehow, when you start removing yourself to distance education, you say, "The kid's done the material; why should I send him an outline?"

A school coordinator emphasized the need to personalize distance learning and expressed the view that such opportunities exist.

> My mind has been really expanded to the possibilities of what we can do. I know it looks like it's an impersonal sort of thing, but I'm getting letters from our tutor-markers that are just lovely, little smiles, little happy faces drawn on them. This beats correspondence to blazes! It may be the same material we're using in lots of cases, but it's been personalized by a lot of the tutor-markers, and there's that rapport between student and tutor-marker that doesn't exist in correspondence that I wouldn't have believed you could manage to do over a fax machine. But they

> are also available for teleconferencing and these kids can phone them if they want to; they are available.

The coordinator also added that "I believe immediate feedback is really important," and sometimes "students may have to wait for more than two days." Another coordinator explained that "in some cases tutor-markers are having trouble with the consortium policy of a thirty-six-hour turnaround. . . . As an educator I would like to see us maintain that because student performance can be affected by the time between reinforcement."

Several respondents reported that students were often reluctant to use the telephone to contact their tutor-markers. One coordinator commented that,

> We have a dreadful time convincing students to use a telephone. Kids do not like to present their problems to a voice at the other end of the line and think they can get an answer. Most often if you say to the tutor-marker, "I'm having a problem with such-and-such," they're very familiar with what they teach, and they can help, but the kids are very reluctant to try it out.

Another school coordinator agreed, and added that if a student took the initiative and telephoned their tutor-marker then the response was generally very good. The coordinator commented,

> That's one thing I can say I'm very, very impressed with, and I'm not sure if it's only within our county or it's within the consortium, but our students are permitted to call their tutor-markers whenever they're having problems, and we've found the tutor-markers to be very receptive. Of course some have their own classroom assignments as well, but they are very responsive to student needs.

One school coordinator commented that "some students need to see the face; they just do. . . . Right now we don't have the money available to introduce the students to their tutors face-to-face." The coordinator explained that she had tried to overcome this problem by asking the tutor-markers to send "a picture and profile of themselves so that the students know there's a body at the end of that fax machine."

Not knowing or seeing the other person was also identified as a problem with the tutor-markers. A school coordinator related that a "new" tutor-marker was initially quite upset, because as she said, "I don't know who my kids are or how many I've got." According to the coordinator, to overcome this anonymity problem "some of the tutor-markers made their rounds and came to our school last year and sat down face-to-face and said, 'Hi, I'm Bob at the other end,' or that type of thing. It gave the students a feeling for the person and what kind of person they were," and also gave the tutor-markers a better understanding of the students.

Coordination with school administration. Another issue concerned the coordination of the work of tutor-markers with the administration of schools. Two aspects of this issue were highlighted in this survey; the first concerns the completion of courses during the prescribed time, and the other concerns the coordination of the tutor-markers' report marks with the schools' reporting schedule and requirements.

With respect to the completion of courses, it must be understood that semester courses are expected to be completed by January 15, or June 15, and full year courses by June 15, to fit in with the employment of the tutor-markers. One principal in particular saw this as an affront to his educational philosophy and the flexibility of distance education. He also considered the school principal and staff to be in a better position to say when a student had finished a course and award a final mark. The principal commented that,

> As the principal of the school, and under the School Act, I have the last say about what marks and what credits are awarded from here. The tutor-marker can send a mark of 22 for a kid and I can change it to 50 and give my reasons why. . . . I've given credits to people who haven't finished courses. . . . I know the student, I know he's satisfied the four basic requirements; attendance, punctuality, effort, and sociability. Therefore if he's satisfied those four things, I don't care if he's finished his course. I want him to finish, but if you are going to insist on him starting all over again, I'm going to award him the credits now, and I'll take care of him finishing the course myself.

Throughout the consortium, tutor-markers had a reputation for being willing to adapt to the needs of the different schools, as long as they were made aware of particular needs. A school coordinator expressed the view that "tutor-markers within this consortium have generally been very, very flexible," and had shown that they were willing to adapt and change to fit in with the organization of most schools. The coordinator described such an example.

> Reporting was a problem last year, because we never thought about reporting at all, and suddenly the first report card came, and we had no marks on our kids in

> distance education. So it was more an oversight than anything. . . . For the second and third report cards we made very sure that tutor-markers got marks in and got some kind of statement of progress for each kid.

The coordinator explained that the marks provided by tutor-markers may not be appropriate for school reports and some adaptation and flexibility by the school is also necessary.

> It's difficult to say sometimes what the marks mean. . . . If a student has only, say, completed two lessons, the eighty-five that he has might be very different to the eighty-five from a kid that has done ten lessons and three exams by that stage. So there seems to be some need to put some sort of explanation on the report cards.

Another school coordinator claimed that, "there's been a little bit of trouble" with reports and information provided by tutor-markers was often insufficient for his school's requirements. The coordinator explained that he had overcome the problem by "tracking" and recording the progress of all their distance education students and providing parents with handwritten reports of how far, and how well students had progressed.

> We actually started reporting last year, but it was all handwritten. I found that if I sent a letter home to each parent, just on distance education, we got a lot more support coming from home, and there were a lot of students that picked up their act. If I sent a letter home, Mom and Dad got a letter that said, "Your student has done three out of twenty," I could just about guarantee they did three lessons during the next three weeks. It helped a lot.

Summary of Part 1

The first part of this chapter dealt with the major elements of the consortium's management structure, and related issues identified by participants. Although this consortium was in the early stages of implementation and in a state of flux, the information provided by respondents indicated that this consortium was in an unstable condition because of a lack of attention to important policy and procedural details, and lack of consideration of key organizational people.

Several respondents commented that the consortium management structure, policy, and operational procedures were either inadequate or inappropriate for this type of organization at this stage of development. The jurisdictions' underlying demands for independence and autonomy, in this new educational venture requiring commitment and cooperation, appeared to be incompatible with the concept of this collaborative movement. The lack of consideration given to the consortium coordinator's key role and the tutor-markers' role and conditions of employment also appeared to be incompatible with the concept of an organization which is expected to continue, and continue to be effective in the future.

PART 2: SCHOOL ARRANGEMENTS

The distance education arrangements for the nine schools surveyed in five jurisdictions are summarized in Tables 4, 5, and 6 in the order they were surveyed. The list of organizational elements in the left-hand column, the numerical approximations of students, course registrations, and course credits, and the "yes" tabulations were all derived from interview data. The "yes" tabulations provide an overview of school arrangements which exist, according to the information provided by participants. While these tables may not be complete or exact, they appear to reflect certain trends within each jurisdiction and school.

For example, the numerical values in these tables generally reflect the extent of acceptance, and the extent of the impact of distance education on each school and jurisdiction. The reasons given for using distance education indicate not only the need for this innovation but the degree of acceptance by key individuals such as principals. Apart from the "correspondence" model, one or more of the distance education models described in the previous chapter have been implemented in the consortium schools.

Other organizational elements identified by respondents concerned supervision, scheduling, coordination, clerical assistance, and support for students through teacher advisor arrangements. These elements, and other aspects of each school's distance education arrangements mentioned above, are listed in the tables and will be supported by discussion and description from interviews and observations by the researcher.

Table 4

School Arrangements in County of Vermilion River

Data[1] For:	School 1	School 2	School 3
High School Students	133	64	55
D.E. Course Registrations	33	59	62
D.E. Course Credits[2]	156	231	232
D.E. Models:			
ACS (Correspondence)	--	--	--
Computer-Based (CML)	--	--	Yes
Multi-Subject (Math.)	Yes	Yes	Yes
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	--	Yes
Curriculum Expansion	Yes	Yes	Yes
Curriculum Enhancement	--	--	Yes
Personalized Learning	Yes	Yes	Yes
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	Yes	Yes	--
D.E. Room/Dedicated Facility	(Library)	--	--
D.E. Students Timetabled	Yes	Yes	Yes
D.E. Supervision:	Librarian	--	--
Scheduled Teacher	Some	Yes	Yes
At the back of other classes	--	Yes	Yes
School Coordinator:			
Principal	--	--	--
Assistant Principal	--	--	--
Teacher	Yes	Yes	Yes
Teacher's Aide	--	--	--
Clerical Assistance	--	--	--
Teacher Advisor System	Yes	Yes	Yes

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[1] As of September 30, Semester One, 90/91

[2] Registrations and credits do not include CML

Table 5

School Arrangements in Wainwright School Division and East Central Catholic Schools Association (ECCSA)

Data[1] For:	Wainwright School 1	ECCSA School 1	ECCSA School 2
High School Students	236	46	40
D.E. Courses Registrations	~40	59	54
D.E. Course Credits[2]	~200	227	243
D.E. Models:			
ACS (Correspondence)	--	--	--
Computer-Based (CML)	--	Yes	Yes
Multi-Subject (Mathematics)	Yes	Yes	Yes
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	Yes	--
Curriculum Expansion	Yes	Yes	Yes
Curriculum Enhancement	Yes	Yes	Yes
Personalized Learning	--	Yes	--
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	--	--	Yes
D.E. Room/Dedicated Facility	Library	--	Yes
D.E. Students Timetabled	Yes	Yes	Yes
D.E. Supervision:			
Scheduled Teacher	Yes	Yes	Yes
At the back of other classes	--	--	Yes
School Coordinator:			
Principal	--	--	--
Assistant Principal	--	--	Yes
Teacher	Yes	--	--
Teacher's Assistant	--	Yes	--
Clerical Assistance	Yes	Yes	Yes
Teacher Advisor System	--	Yes	Yes

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[1] As of September 30 Semester One, 90/91.

[2] Registrations and credits do not include CML.

Table 6

School Arrangements in Provost School Division and County of Beaver

Data[1] For:	Provost School 1	Provost School 2	Beaver School 1
High School Students	84	62	89
D.E. Course Registrations	15	6	44
D.E. Course Credits[2]	65	24	179
D.E. Models:			
ACS (Correspondence)	--	--	--
Computer-Based (CML)	Yes	Yes	Yes
Multi-Subject (Mathematics)	Yes	Yes	Yes
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	--	--
Curriculum Expansion	--	--	Yes
Curriculum Enhancement	--	--	--
Personalized Learning	--	--	--
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	Yes	Yes	--
D.E. Room/Dedicated Facility	--	Yes	--
D.E. Students Timetabled	Yes	Yes	Yes
Timelines--Chart on Wall (COW)	Yes	Yes	Yes
D.E. Supervision:			
Scheduled Teacher	--	--	Yes
At the back of other classes	Yes	--	--
School Coordinator:			
Principal	--	Yes	--
Assistant Principal	Yes	--	--
Teacher	--	--	Yes
Teacher's Aide	--	--	--
Clerical Assistance	--	--	Yes
Teacher Advisor System	--	--	--

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[1] As of September 30 Semester One, 90/91.

[2] Registrations and credits do not include CML.

Models and Inservice

The tables indicate that three models of distance education are generally used in schools throughout this consortium. The "ACS (Correspondence) Model," previously the only alternative for students in these small remote schools, has been superseded by one or more of the other three modes.

Variations of the "Computer-Based (CML) Model" were widely used and more readily accepted by school staff for multi-level mathematics classes. In some cases CML mathematics courses were simply facilitated by a teacher, who acted as supervisor rather than as a specialist mathematics teacher. In other instances CML was used as a resource to supplement traditionally taught multi-level mathematics classes. In some schools the CML print material was also used in schools without the computer hardware for multi-level mathematics classes in what has been classified in the tables as a "Multi-Subject (Mathematics)" model.

The "Multi-School Model" was used by all the schools in the consortium, and it was the main reason for the consortium's existence. Generally, in each school, students in different subjects, grades, and course levels were grouped together in discrete classes, timetabled, and supervised by a teacher. The distance education students in each school were able to interact with their external tutor-markers via telephone or telefacsimile machines. Unlike the CML models, this cooperative effort among schools required the centralized consortium coordination of the tutor-markers and a greater degree of collaboration. Cooperation and communication between student, tutor-marker, and school personnel was essential, and effective operation of this multi-school model required a greater sharing of teacher and administrative expertise and other resources such as course materials, consultancy services, and inservice, than may be the case with traditional schooling.

Several respondents commented on the need for inservice and other opportunities to learn how distance education worked in other parts of the system. Participants wanted to know how they could improve their participation, and expressed the need to meet other consortium members. A school coordinator admitted that "last year so many of us were feeling our way and didn't know what we were doing." An assistant principal commented that, "I've met most of the tutor-markers [at an inservice] at the beginning of this year and laid out what our philosophy was going to be and some of our expectations. . . . It helped a lot." A school coordinator commented that "we spend an awful lot of time on the telephone talking to one another, mostly discussing students and perhaps some concerns with the program and so forth." From comments such as these it was obvious that there was need for more inservice to enhance cooperation, communication, and understanding of the distance education process. Participants expressed a desire to meet the people they communicated with daily by phone, computer, or fax, and expressed a desire to know more about distance education outside their own schools, jurisdictions, and consortium. Most participants showed a keen interest in the future of distance education technology and pedagogy, and expressed their desire to know more.

County of Vermilion River

Three of the four schools using distance education in the County of Vermilion River jurisdiction were surveyed about the end of November 1990, two months into the start of the second year of distance education in this jurisdiction. Table 4 indicates that the distance education arrangements in each school are similar but each has organizational peculiarities which will be highlighted where appropriate in the following discussion.

The numerical data for the Vermilion River County in Table 4 indicate a substantial involvement in distance education and willingness to use distance education to expand the curriculum in its three schools. For example, languages such as French, Spanish, Ukrainian, and German, and interest and career options such as psychology and accountancy have been added to the curriculum. Previously these courses were unavailable because of low enrolments and a lack of specialist teachers. Jurisdictional reports indicate that distance education has "expanded" the curriculum of each school by about 20 courses. The mathematics classes have been rationalized into larger and more viable units using either the regular CML mode or the CML print material without the computer. The CML mathematics classes usually included the higher and lower level courses, which attracted small enrolments, such as Mathematics 31 and Mathematics 13, 14, 23, 24, and 33.

Table 4 also indicates that the curriculum has been "enhanced" by offering students more opportunities to study the regular courses at different times, and possibly repeat courses which were previously unavailable because of timetabling difficulties in the small schools. According to one principal,

> I think the biggest gain for us has been in those areas where they are taking a mixed diploma; advanced and general diploma courses, or where they're out of synch', and trying to catch up, because in a small school that doesn't usually work. . . . If a student fails one subject in a small school they get out of synch and have trouble finding it again on the timetable."

In one school distance education was being used to provide extra learning opportunities for more able students and has been classified in the tables as "curriculum enrichment." The school coordinator explained that,

> The girl you saw doing the world geography course-- is doing it simply out of personal interest. The kids who are taking French 30, that's really a personal-interest kind of thing. . . . And, we have a girl in grade 9, a very bright girl, and she's really interested in German, so we put her in German 10 just for enrichment. . . .
>
> She's really happy with it. I was really surprised, because I was kind of concerned about where the student was going to get the time for it, because obviously in grade 9 there's no built-in time in the schedule. She takes it home, and she does it on her own, she gets her lessons in. She's probably one of our most conscientious distance education students.

Distance education was also used to accommodate other "individual student needs" and provide "personalized learning" opportunities for students throughout the consortium. According to a deputy superintendent some students are unable to graduate without distance education. "If a student transfers in from another school, small schools have a problem with that. . . [particularly] if a student transfers in from a semester school into a ten-month system." The deputy superintendent added that "for a few students it happens to be the model of learning that appeals to them. . . . It's allowed some students to feel awfully good about themselves." This comment was supported by a principal who stated that "some of these kids have had success with distance education, and some, I suppose, are better suited to being a little more independent, and like working on their own."

Irrespective of the possible benefits of distance education, two out of the three principals of schools surveyed in this jurisdiction expressed the view that distance education could be detrimental to the existing school organization. One principal commented that "if we lose too many students to these distance education courses, then our own [traditional] courses become a little less viable." However, these two principals were prepared to tolerate distance education as a temporary intrusion in order to access funds which were currently available through the distance education grant. The third principal was more concerned with the range of opportunities distance education provided for students, and enthusiastically participated as part of the distance education supervisory team.

Table 4 indicates that teachers in the three schools are directly involved as coordinators, supervisors, and advisors. This involvement, or "empowerment," of the teachers may have something to do with the relatively high level of student participation in distance education and their high course completion rate of 80% (average) for the three schools in the first year of operation. This success has been achieved without the support of two of the three principals, and without clerical assistance, dedicated distance education rooms, and computer hardware for the CML courses in two of the schools.

Although a dedicated distance education room or facility was not provided, each school had used either the library, a normal classroom, or an existing computer room. While direct supervision, and timetabling of students appeared to be jurisdictional policy, the supervision of distance education had been added to the librarian's role in one school, and in the other two schools teachers were timetabled and shared the role. Some students, who could not be accommodated with the normal arrangements in the latter schools, joined other classes in similar courses "at the back of the class," with teachers who were able and willing to provide assistance with the distance education courses. One of the school coordinators explained the arrangements, which were similar throughout this jurisdiction, as follows:

> As much as possible we try to timetable the distance education courses as regular courses. We have two periods a day that we run distance education in that little room you've just seen. . . . Probably something like eighty percent of our distance education students take courses in those two periods. There always seems to be the odd kid and for whatever reason their distance education courses don't work out in those periods. There we assign the kids to the back of a classroom, and we try to do it with a related class. For example, I have two kids taking Social 23 by distance education who are assigned to my Social 20 class every day, so it tends to be a fairly structured program.

Outside these structured classes, informal assistance was freely available from teachers in all three schools, and one had developed a teacher-advisor system whereby all distance education students are assigned to a particular teacher for guidance. One advisor explained that while some students met with their teacher-advisor in their regular classes, other students had to seek out the teachers at other times.

> I have twenty students under my direct supervision. . . . I make sure their assignments are handed in on time; I administer exams and supervise all the exams under my direct supervision, and I keep track of all their marks and when they are sending things in. When they receive them back, I try to help them out if they have any questions.
>
> They come to me all day long if they have problems. . . . I have about eight that work at other times on their distance education so they'll come to me in the middle of a different class and say, "I want this," or "How do I do this?"

A principal in another jurisdiction estimated that the clerical work associated with the tutor-marked courses required about 15 minutes per course per week, which would average about 14 hours per week for each of the Vermilion River County Schools. The clerical work consists of faxing completed answer sheets to the tutor-markers, sorting the lessons returned to the school, recording marks and progress, and returning the lessons to the students. Extra clerical assistance was not provided in these schools. The extra work was done by the teacher-supervisors or the existing clerical staff in the schools. As the school coordinator and supervisor of 20 students, explained:

> I don't have to prepare lessons for the students, but it's a lot of work in the sense that I'm faxing things, making sure that what the students fax out is properly done. It sounds trivial, but it's a lot of hard work, running the exams off and keeping track of what marks they got, when they sent them in, when they're due. All my students except two are on time with sending in everything.

This teacher also described her other role as school coordinator as follows:

> I'm the school coordinator and an advisor; first-year teaching and first-year coordinator and advisor. . . . When I was hired I was told that I would be doing that.
>
> How have I found it? Great! It's a lot of work, especially at the beginning of the year, getting all the students registered and things ordered, and making sure the applications are filled out properly.

The effective implementation of distance education throughout this jurisdiction appeared to be related to the involvement and enthusiasm of key people such as the school coordinators, and the cooperation and support of advisors and supervisors and clerical assistants. Most of the people in these positions willingly accepted the extra work and made distance education work for this jurisdiction. At the same time the jurisdictional administration has cautiously adapted distance education arrangements to suit the existing facilities, teachers and support staff, but has allowed some organizational creativity and flexibility within each school. While some administrators have seen distance education as a means to access funds, other administrators and most of the teachers involved with distance education have taken advantage of the opportunities to expand, enhance, and enrich their school's curriculum, to overcome the organizational difficulties in these small schools, and provide learning opportunities for a range of individual students' needs.

Issues

With respect to arrangement issues, a principal commented that

> I think it's like anything else, and the biggest positive about it is the flexibility, and the biggest potential drawback or danger is getting spread too thin, just drawing

> people out of your own courses into distance education courses. I happen to feel, in general, that teacher taught courses in classrooms are more valuable than a correspondence course.

Another principal saw distance education "shrinking and becoming smaller" because of the costs:

> I can see people starting to draw back and saying "What can we do for ourselves? Do we have some under-utilized teachers who could be marking for our schools, as opposed to sending these credits out to somewhere else, and having to pay for them?"

A similar concern was expressed by a school coordinator, who saw the main issue as "time and cost." The coordinator commented that the extra teacher time for coordination and supervision "in a fairly small school" is significant, as well as being an extra cost. The coordinator remarked, "I think at the county level there are some concerns about how much time we're putting into distance education."

A school coordinator spoke about an issue that was commonly expressed by teachers who felt threatened by distance education.

> When I didn't know a lot about it, I was concerned about my job. . . . I was concerned about them taking away my position and just offering the courses within the distance education curriculum. . . . But now I know how it operates, I know they'll always need me here to coordinate things; I can't be replaced like I thought I could be at the beginning.

According to another principal distance education "in its infancy" with "massive growth capabilities," but it's a matter of getting it flowing smoothly, developing appropriate policies and long-range planning, and deciding "where we want to be in five or ten years."

Wainwright School Division

A large high school was the only school surveyed in the Wainwright School Division. With 236 senior students this high school is the largest in the consortium, and because of its size, the only school unable to access distance education funds. Because of the different characteristics of this school an alternative perspective on distance education and its organization was expected from those involved. However, like other respondents in the smaller schools, the principal of this relatively large rural high school saw distance education as a means to solve similar curriculum and timetabling problems, and also as a technological innovation which had tremendous potential. The principal explained that

> In the consortium we're probably one of the biggest users of distance education. Distance education is not attractive just to small schools. Even in the large high schools, the more students you have, the more timetabling conflicts you're going to have.

The school's distance education supervisor elaborated on the timetabling and staffing difficulties, and commented that,

> Last year we lost two-and-a-half teachers and the timetabling has become horrendous for the number of students that we have, so we've tried to utilize distance education to fill in where we had either timetable conflicts or where the student wanted a class that we couldn't offer in the school.
>
> I think they depend on us [distance education] to overcome their timetabling problems. The timetabling cuts that arise from the teacher cuts are just phenomenal, and if they didn't have distance education in this particular school we would be in a lot of trouble trying to offer the kids what they need to get the high school diploma.

Altogether, the principal suggested four reasons for using distance education in this school. The first reason concerned the timetabling conflicts, which have been classified in the table above as "curriculum enhancement," or adding more of the courses already taught in the school. The second reason given concerned "curriculum expansion," or to provide courses which are not in the school program. The third reason concerned "individual student needs" which the principal explained as follows: "If a student failed a course at least once, for whatever reason, maybe it hasn't worked out in the classroom, and would like to try a different avenue, they have the option of taking it by distance education." The fourth reason was more general and explained as "an approach to the delivery of education which I think we have to adapt to meet the demands that are being placed upon the system and the schools in the nineties and in the future." The principal suggested that distance education was the forerunner of more sophisticated technology and information systems in schools, and in the future the role of the teacher would change to accommodate these new technologies. The principal believed that his school should be a part of this technological and pedagogical change even at this early stage of development.

With respect to the current arrangements, the principal commented that most of the distance education students were taking core or academic courses in English, social, and mathematics, although "science isn't quite as popular." Students also took a variety of elective courses "such as record-keeping and personal living skills just to pick up credits."

> In terms of timetabling, if our students have a spare and they're taking a distance education course, they're timetabled into the room that the distance education teacher works in. Attendance is monitored; they work there just as if they were taking a regular course.

A full-time staff member and a clerical aide were employed to coordinate, supervise, and facilitate distance education in the school. The principal explained that,

> The [teacher] staff member is a tutor-marker for the high school English and social studies courses within the consortium. She operates out of this school. We make available to her all of the resources that our school has in terms of texts, test bank files and she works with the subject teachers [within the school] to develop and offer her program.

The staff member, who was a full-time tutor-marker as well as the "in-school supervisor," explained that she supervised "approximately 50 to 60 students in the high school," but commented that,

> My outside marking is far more involved than that, I'm looking at 550 credits and a hundred and ten students. At least a hundred and ten students in English, all of social studies, art, personal living skills, psychology, sociology, two CALM students; there's a total of twenty-two courses, in any case.

According to this supervisor/tutor-marker some assistance was provided by the clerical aide, who "works for myself as well as [the jurisdictional coordinator], and she also types for the other teachers who are tutor-markers within this division as well." The principal explained that the aide

> Is the clerical assistant for all the tutor-markers in terms of preparing lessons; we supplement our lessons quite extensively beyond what the correspondence school or LRDC provides for the students. We make up all of our own exams and numerous assignments. . . . So she's quite busy preparing those things. . . six-and-a-half hours a day.

While there was no formal teacher advisory system, according to the supervisor/tutor-marker,

> Another thing we do in this school, we make use of our in-school teachers as well. If a child is having a problem and they're really reluctant to contact the tutor-marker, then we'll say, "why don't you go see Mr. _______ ?" or "Why don't you see one of the other staff members?"
>
> We've got excellent cooperation on this staff, and on all the staffs as far as the division [this jurisdiction] is concerned, as well. I think you'd find there's a tremendous amount of interaction between the staff and the distance education kids.

Issues

In this Wainwright school the distance education arrangements were not ideal; according to the supervisor/tutor-marker she had a very heavy credit load, and the partitioned library space used for the distance education room was not the best facility possible. However, it was interesting to note that the principal's positive attitude and support appeared to be reflected by the staff and a program which sought to accommodate students' educational needs.

While the supervisor/tutor-marker saw the main problem as "motivating students," the principal provided a broader perspective of the school arrangements, the consortium and education generally. The principal indicated that while he was pleased with the development of distance education in his school, the main issue concerned the deficits of consortium policy and planning, which restricted cooperation between schools and jurisdictions. The principal stated, "In our school? We don't have any problems per se, but when I look at the system, there's been some lack of planning, lack of foresight, lack of clarity of roles." However, the principal expected that distance education would survive, improve, and possibly expand within his school. The principal believed that distance education had the potential to solve some of his school's timetabling and curriculum problems now, and would be a greater asset in the future because of educational changes and demands which will be brought about by societal factors, such as "the shift from a rural to an urban base, the economy, and technology."

East Central Catholic Schools Association

Two schools were surveyed in the East Central Catholic Schools Association (ECCSA) jurisdiction. Both schools, the first with 46 senior students and the other with 40 students, used distance education extensively. Relative to their size, these schools were the largest users of distance education in the consortium, but the two schools were different in many respects and are treated separately in this discussion.

The First School

The school coordinator, in the first ECCSA school surveyed, explained that distance education "rounds out our program. We have such a small staff in the high school that we don't have the personnel to cover the extra things we'd like our kids to have, and we really want them to have everything that's available in a big school. . . . And it is!" The coordinator also commented that distance education "is totally integrated; it's not considered different, it's just considered one of the means of delivery."

In this school the principal's role, attitude, and educational philosophy profoundly affected the apparent success and acceptance of distance education. The principal was involved "in all facets of this school's program." The coordinator commented that

> He's in charge of the [distance education] work experience program himself, but to take on the role of coordinator too, as principal, is physically impossible. But it has his stamp of approval, and he does make it easy for us to run the program within the school. He's enthusiastic about it.

Three years ago the principal "inherited" a very traditional school that was "dying a horrible death, mainly because of numbers, and we had to look for other methods of delivery." He explained the changes as follows:

> What happens with schools sometimes: We say "Let's solve the problem with our high school by offering less credits, and be very good at the ones we offer." Then, because we're offering less, the parent and child say , "I'm not going to that school." So it's a self-defeating circle; you're just going to destroy yourself in the long run.
>
> So then I examined my bias for personalized learning, which to me is the only way to go as opposed to mass education. We're going towards the year 2000

> when change is going to be important. . . . In the process I had to examine other models, and one model, of course, is Bishop Carroll. Bishop Carroll is a school where students come and start where they start, and end where they end. . . in other words traditional teaching doesn't take place, but formative learning does.

The term "formative learning" to the principal meant that the student is given the power and responsibility to influence their own learning. This concept underlies the distance education arrangements, which the principal explained "dovetail" into the school's "personalized philosophy of learning."

> We start personalized learning in our middle level, grade 6 and up in mathematics and sometimes in science. Some grade six students are doing grade 7 or grade 8 mathematics and have just accelerated ahead. Teachers must have learning packages prepared and ready to give to the students, and be very, very good managers of the room.

According to the principal, distance education courses are taken by

> A whole range of students from grade 9 to grade 12. . . . I've got a grade 9 student who is doing Food Prep. 12 which is a high school course. I also have students in restaurants and machine shops and doing mechanics and welding all throughout town taking vocational education courses. . . . This is just another process of distance education outside the school facility.
>
> I think we are offering four hundred and some credits. We're offering the same number of high school courses as a high school of fifteen hundred students and our high school has only sixty students [including adults]. So through distance education, vocational education off campus, and through our learning centres, we're able to offer a multitude of courses that we couldn't offer in the past. . . . We allow our students to access any distance education course they want.

The students make up their own timetable and "dovetail" their distance education courses in with the core courses which are taught in the school. The school coordinator explained that,

> We just simply say, "Here's a schedule of what's available at each time. You choose, bearing in mind that you have to have five of this or ten of that, and whether you're semestering," because they have an option to semester or not. When they finish at the end of the year, they may or may not be finished all the subjects they started at the beginning of the year. They could be carrying stuff over to the next year. June is not the end.

The coordinator also explained that all levels of core subjects in English, social studies and mathematics are taught in the school, "because we don't have to worry about scheduling [each grade and level of a subject separately]. In that class we just left, you will find all English levels and all social studies levels right now, because it's individualized." That is, teachers provide their own course units, individualize instruction, and team teach in a multi-level and sometimes a multi-subject environment. All the mathematics courses are also available in the school through the CML mode. Apart from the core courses and mathematics, all other high school courses offered in this school are taken either through work experience or distance education.

This school also has two other groups of distance education students, adults and home-study students. According to the principal, "we have about eight adult students, anywhere from age twenty to thirty-five that come into the school on a regular basis. . . to pick up materials and hand materials in to be corrected." Although there appeared to be no guarantee that the school would be reimbursed for the schooling provided for the adults, the principal explained the reasons for this initiative as follows:

> I think it's the philosophical nature of the school, that we're a community school, that everybody should benefit from this school, and also the presence of an adult in a classroom has a tremendous influence on young men and women of sixteen, seventeen, eighteen years of age.

With respect to the home-schooling group of students, the principal explained that,

> In certain cases where young men and women cannot cooperate or have difficulty working with a group of ten, twenty, thirty or forty other students, based on their success, are allowed to do their work at home, and then they come in once or a week or every two weeks whatever it may be. . . . Last year, at the most, we had five [of these students]. . . . Three were very good. Two blew it and had to come back to the traditional mode of being here. But three were very successful. One young man finished his whole diploma, did two years in one year's work by doing it at home. Again it comes down to the individual. Each one has to be treated as a client and an individual unto themselves. That's the only way to go.

The school coordinator explained that within the normal school environment English, social studies, and most distance education courses were conducted in the humanities room; a double classroom which accommodated the 46 high school students when necessary. This room was the focus of the high school program, and a teacher, a teacher's aide and possibly an instructional assistant were available to assist the students at set times for the core courses or at other times for distance education courses. The staff had times when they were scheduled to be in their centres, and students could be assisted and supervised in the humanities room, the science room, or the mathematics/CML centre. The coordinator commented that "it's all very much team teaching. Anybody who is jealous of his classroom and wants to be stuck behind a door can just forget it in this school. You come in as part of the team." The coordinator explained that during this implementation stage the regular high school and "integrated" distance education programs were the responsibility of a relatively large "team," which consisted of

> Three teachers, three instructional assistants, and then we also have three aides that work to turn out the material, that work on the computers and man the silent study room and just make sure all the paper-work is flowing right and everything like that. That's nine people that are there for, let's say, forty-five people; that's a five-to-one ratio. . . . And once it's [fully] implemented, of course we will not have the aides there any more. We'll probably hold one who will revise and update, but we won't be having the other two.

The school coordinator was also one of the instructional assistants and explained that

> An instructional assistant has a teaching licence; that's the first thing. But they do not evaluate and they do not set the program. . . . We're not hired as teachers. For a lot of teachers this is a really attractive thing because it's almost like an intern program for the young ones. They can get in and get their feet wet in a way that's non-threatening to them. Then there are people like me, who want to get back into teaching, who have been out of it for a while, or I'm from a different province, and I may hold a teacher's licence from Nova Scotia, but that doesn't mean Alberta thinks much of it.

As a quarter-time school coordinator the instructional assistant was responsible for overseeing the distance education operation, which she apparently enjoyed and worked at enthusiastically. The coordinator explained that

> At present, I'm doing a lot of the clerical work. It started off that we thought that one person could do the whole thing, but they wanted me in the classroom too, so we had to let something go, so I'm training someone to do the faxing and that sort of thing. I also train; I manage. . . . I make sure that the students are registered; that the records are set up and that they're kept; that they all have their distance education materials, they're all ordered. I facilitate teaming them up with teachers who would best help them, and sometimes not even teachers.

This high school had a two-tier system of advising and supporting the students. According to the school superintendent, the first level was the "teacher-advisor" system, which was "like the old homeroom teacher, except that they nurture community, and work individually with each student." Each of the four groups of about 10 to 16 students meet with their teacher-advisor twice a day for ten minutes and one full period a week to build community and discuss and attempt to solve problems students may have with any facet of their lives and schoolwork including distance education.

The second level of support for the distance education students was provided to individual students by teachers or other interested and qualified individuals from the community. The coordinator explained this initiative as follows:

> They prefer teachers in other systems, but as far as I'm concerned, if somebody is an expert in his field, he will do just as well. . . . We use resource people from everywhere, whoever fits the bill that is around and can help these students, because education is not just teaching; education is community. . . . It doesn't matter to me where they come from, just so long as they understand a code of ethics, that they don't talk about these kids all over the place, that they're good in their field, and that they're willing to help.

According to the coordinator, because the extra tutors, helpers, and adult students from outside the school are usually employed or busy during the day, the school is open one night each week for three hours. At this weekly tutorial, the coordinator explained, "we have our aides, instructional assistants, teachers and [extra] tutors in here. We also have parents who come in to volunteer to do busy work, be it duplicating or whatever." However, there are about six regular tutors from outside the school, as well as others who can be called upon, to assist students with subjects such as bookkeeping, accountancy, and mathematics. The coordinator described the success of this initiative, at least in terms of one of the tutors from the community, in the following quote:

> So far it's been really good. They enjoy it. We have somebody who comes in and tutors in mathematics or things connected with mathematics, and she is so enthusiastic. She said, "You know, it's been wonderful. I was strong in mathematics and all of a sudden I'm going back, and I'm remembering all this stuff, and it's so nice." She said to me the other day, "I've worked through all of Mathematics 10, now I'm ready for Mathematics 20.

The coordinator commented that this involvement with adult students and community members has had a positive effect, not only on student results, but on how they learn.

> The adult presence is neat; the kids are slowly deciding that "if a big person is there, they must be there to help me." So they have gone from "The Teacher's here to help me" to "Anybody that's in the classroom is here to help me" to "Anybody that's in the hallway is here to help me" to "Hey, we can help one another." That's the stages they're going through.

Issues

The personalized learning philosophy underlying the distance education arrangements in this school and the "empowerment" of students and staff involved in this program, were very impressive. But such radical change from the traditional model of schooling to a personalized model of learning posed some problems for students and teachers. In a recent evaluation the superintendent explained that,

> The Advancement By Competency (ABC) model is known by a variety of names--personalized learning, competency based learning, individualized learning etc. Whatever name it is known by, its basic premises and processes are similar. . . . The major student challenge is the shift to student responsibility for choices, time management, independence and the practise of self-discipline. The teacher is facilitator, partner, and motivator assisting students to make choices, assume responsibility, being mentors and counsellors as well as subject area specialists.

The superintendent concluded that there was a need for "student preparation and inservice to deal with change" from the traditional model to the personalized learning mode. Students did not always have the ability to make choices and decisions which affected their progress in personalized learning, and the superintendent recommended that there was a "need to address the 25% of students who are incapable of self-direction and discipline at their age/grade level." The "level of student literacy" needed to be addressed, so that students could be more independent, and there was a "need to deal with many students' fears of one to one relationships with significant adults such as teachers."

The superintendent also identified problems with teachers associated with this change.

> My findings concerning teacher attitudes regarding ABC identify three broad groups. One group includes teachers passionately and professionally committed to the ABC concept, a commitment of heart and mind. A second group included teachers who have made a mental and technical commitment but are still leery of the impact on the student, school, and perhaps more so, on themselves. The fear and uncertainty associated with change, a reluctance to experiment with new or different approaches and other psychological factors play roles in the "yes. . . but" attitude and position. A third group has acquiesced to the ABC model and on the surface are participating when no alternative model is open to them. However, I would suspect that since these teachers have not bought into the system, any opportunity to sabotage or subvert the system may be availed of. While they may have and continue to participate in the ongoing dialogue of planning, delivery, and assessment they have not accepted the consensus that the teaching body has achieved with respect to the ABC model.

Irrespective of these problems the superintendent concluded that the implementation of the personalized learning model, of which distance education was an integral part, was progressing successfully:

> I can say that the ABC model has met with considerable success among teachers and students. For example, attendance at large group sessions is very high, students on task seem higher than previous to ABC (as reported by some teachers). The results of Grade X11 diploma exams written in January 1990 are above provincial averages. As with any enterprise the ability to get 100% participation, by desire and will, cannot be expected.

The increase in the high school enrolment was another mark of the success and acceptance of this innovation by the community. At a time of declining enrolments in other schools in the area, the enrolment in this school has increased during the second year of this innovation by 12 students, or 25% of its present complement. In the coordinator's words, "things are not tip-top yet. . . . I think that if it is properly nurtured and properly organized it's going to be an acceptable thing. The kids here, because of the way that it dovetails in, are not suffering markwise, by any stretch of the imagination; their marks are good!"

With respect to other issues concerning the school arrangements, the coordinator commented that she believed that the student advisors should be more available, and tutor-markers more accessible. The principal expressed his concerns in more general and philosophical terms as follows:

> I think the problem that exists with distance education is that you've got this beautiful bird called distance education flying into a traditional structure, and it's just peaked. Some of the teachers aren't prepared for it. They can't handle a kid accelerating or taking an extra week or two to do something; they get all up tight about it. Therefore, I think the biggest issue is the retraining of teachers to go from the mindset of the traditional giver of information to the facilitator, because in distance education you can't be a giver of information, because you might have twenty courses that you're covering. You have to facilitate the process, you have to manage the room, and you have to make sure that all the students reach their potential.

The superintendent concluded that,

> Both ABC and the traditional model are schooling. But each has its own flavor, appeal, and benefits. I believe the benefits of ABC to the student growing into the future outweigh those of the traditional model. For this belief, I am prepared to experience and live with some uncertainties, some growing pains, some risk taking.

The Second School

The second school surveyed in this jurisdiction was different in terms of school philosophy, teachers' attitudes to distance education, and the way it was organized. Because of a recent change of principals, and because he was the mathematics teacher, the assistant principal had taken on the full responsibility for distance education:

> I was thrown into it last year, just because we had a grant from Alberta Education and our superintendent said, "We will do distance education." I was the person that was asked to be the coordinator because I was to be the mathematics teacher using the Microvax computer.

According to the school's superintendent and the coordinator, distance education was gradually becoming an accepted part of the school program because it was satisfying a genuine need to expand the curriculum for this small high school with only 40 students. The high school curriculum had been expanded by about 20 courses to include a greater range of the elective subjects. The coordinator commented, "it's probably doubled what we could offer in our high school as far as options go; more than doubled." While the CML distance mode was used for mathematics, distance education was not for other core courses because the teachers in this school believed that "a teacher in front of a class teaching a subject is the best method of delivery." However, because of the efforts and interest of the school coordinator, who was also the mathematics teacher, the mathematics curriculum was expanded to include all nine CML mathematics courses. CML was also more acceptable because it was used to complement traditional instruction and teachers felt comfortable with "a teacher in front of the class." According to the coordinator, distance education was not initially accepted by teachers in the school:

> [Teachers] were slow to warm up to the idea because they were intimidated and thought that distance education was going to put them out of a job. For that reason, I think, the walls of defense went up right away. They also saw all this money and all this equipment going in and wondering, "Why the heck is distance education getting all this when we could use the money for other things." I did an in-service about this time last year just to smooth the waters and let them know what was happening. . . . So we've kind of put our velvet gloves on, and I think we're going to be successful.

The coordinator was the only person involved directly with distance education during the first year. At the beginning of the second year a half-time clerical aide was appointed and a small number of teachers had agreed to supervise distance education students at the back of their classes. The coordinator explained these developments as follows:

> My feeling was, if we're going to do this thing, let's do it right. So I started as the school coordinator, and I was all of the teacher advisors for the students. After a while I was just overwhelmed, so I asked the superintendent for clerical assistance, and now we have a half-time office person that does all the our faxing and all our filing. . . .
>
> Last year we didn't make any of our teachers buy in; and it just about drove me nuts. But this year we've had teachers who are a little bit more willing to buy into the program, and I think we're at the point now where next year we're going to have no problem with it. So they're warming up to the idea.

This year grade 11 distance education students were timetabled into the second period every day and were supervised by the coordinator, who explained,

> I'm just in there to help them, motivate them a little bit, and monitor them. If they are having problems, I help them contact their tutor-markers if I can't help. If there's a problem coming from a tutor-marker, then I act as a relay person, or set up teleconferences.

Students who worked on distance education courses at other times were assigned to the distance education room with the coordinator or to a classroom with another teacher. The coordinator also commented that "some of the grade 12 students we've let go on their own. Sometimes it works well, but sometimes by mid-term we put them back into a class."

The coordinator described two innovations which had not been mentioned before in this survey of schools. The first concerned the physical arrangements of a dedicated distance education room, which was also the mathematics room and contained the Microvax computer for the CML mathematics courses. "We've changed the structure of what we call the distance education room drastically. We've pulled most of the desks out of there and we've just put in some study carrels and tables." The coordinator explained that the carrels were better for independent study, while the larger tables allowed students to spread out their distance education material and work in small groups.

The second innovation concerned the filing of student lessons and the tracking of student progress. The coordinator explained as follows:

> We've got timelines set up for our students; each student draws up their own timelines. We allow our students to have either one module or two lessons at a time, and we keep the remainder in the office so we can monitor it a little better. . . . With courses like mechanics and building construction, if you've got a copy of the lessons that somebody did last year you've pretty well got it done. We were concerned about that, so we started to keep everything on file. We allow the students to come and get the filed material to study while they're supervised so there are not too many copies floating around.

Issues

With respect to issues or problems concerned with the distance education school arrangements, the coordinator commented that,

> Right now I don't know if we have one, but the first major problem that we had was getting students to accept that this was the way we were going to go. It was something new, and change is slow and hard to implement, and this was something that was just dumped on them.

The coordinator also referred to problems of "getting materials" from LRDC at the beginning of the first year, but at the beginning of the second year this problem had almost been completely overcome. The coordinator commented that "we had ninety-five percent of our materials ordered and ready to go on day one in September."

Provost School Division

The tentative nature of the Provost School Division with respect to distance education is apparent in the numerical data, with only six distance education students in one school and 15 in the other, which does not include the CML mathematics students. It appeared that this jurisdiction's aim was to maintain the status quo and adapt distance education in a limited way to the existing system without affecting traditional instruction or scheduling. According to one assistant principal, "we've caused distance education to work within our present system, so I don't see that there's been any drastic changes."

Similar reasons for using distance education were given in both schools. The reasons given focused on individual student's needs. According to one coordinator,

> We've got students who have failed previous courses, and in order to help them graduate on time, we're using using distance education. That's one case. A second case would be timetabling conflicts for a student to make credits, and a third case is, students having an interest in a course we don't offer.

Teachers had limited involvement with distance education in both schools. Teachers used the CML technology and material to complement traditional classroom instruction, and occasionally had distance education students at the back of their classes. In one school the assistant principal was the coordinator, and students were supervised by teachers at "at the back" of regular classes. In the other school the principal was the coordinator and shared the casual supervision of distance education students with the assistant principal. In the latter case there were only six students involved with tutor-marked distance education courses, and while there was "a time-slot available on their timetables" and "a room set aside," the students appeared to be provided with minimal supervision and assistance. The principal stated that "the vice-principal or myself aren't there all the time, but we drop in periodically."

The impression was also given by the numerical data and the respondents in this jurisdiction, that only a minimum, but acceptable number of students was registered in distance education so that the jurisdiction would be eligible for the distance education grant.

It was also quite clear that traditional teaching and the traditional curricula were not to be affected. In each school, it appeared that the principal or assistant principal had kept direct control of distance education, and kept it under control, so that it would not "grow" and affect the traditional programing, scheduling, and staffing. To explain this situation the respondents at the two schools and the county superintendent had emphasized four points which are paraphrased as follows:

1. The board is adamant that distance education will not be used to replace teachers.
2. Distance education is an add-on to expand the curriculum, not replace it.
3. No extra staff will be hired to run distance education.
4. Without the grant distance education would not continue in this jurisdiction.

This situation was summed up by one assistant principal who said "the school board feels very strongly that this is not designed to replace teachers, so that if there is a reduction in staff, it would not be because of distance education. I think we're all in agreement that hands-on teaching is the most effective method."

Issues

No clerical assistance or teacher-time was allocated for distance education in this jurisdiction. Although distance education was not extensively used, faxing, filing, distributing lessons, and coordinating required a significant amount of time in these small schools. According to one coordinator the main issue within his school was that "distance education takes time. . . . And that's one thing we have to identify with our board, that time is coming from somewhere to put this into effect, and there needs to be some recognition of that time."

In the other school where the principal or the vice-principal "drop in periodically" to supervise the distance education students, "time" did not seem to be a problem. As the principal said "the major issue is keeping them [the students] on schedule."

County of Beaver

Only one of the two schools using distance education in the County of Beaver was surveyed. Apart from limited CML use in the first year, the other school in this jurisdiction had introduced distance education only two months before this survey and was excluded because of its limited history and experience. The school surveyed was in its second year of distance education, and had about 42 out of 89 senior students involved, and a small number of students taking one of the range of CML mathematics courses.

According to the assistant superintendent the main reason for using distance education was to expand the curriculum. "We have some small high schools, and can't offer the full range of programs, so we elected to go with distance education." The principal explained that the student/teacher ratio is also a consideration, and while "the bulk of our mathematics courses are without CML. . . if we get fewer than 13 students [in a class] then we offer the course through CML."

Like respondents in other small schools, the principal viewed distance education as a means to solve similar curriculum and timetabling problems. The principal commented, "it certainly has improved things for kids in a small school where scheduling is tight. If a student fails a course it's very, very difficult to fit that course into next year's schedule." The principal explained that distance education students usually fall into three groups; those "looking for courses that are not available" at an appropriate time on the timetable; those "looking for courses they have to pick up, for whatever reason;" and those "picking up a course we can't offer." However, the principal added that if a course is offered in the school and is available on the the timetable it cannot be taken through distance education.

The principal commented that the distance education arrangements had improved since last year when he was responsible for about 27 distance education school students and a small number of adult students. The arrangements changed at the start of the second year when the number of distance education students increased to 42. A teacher was hired on a half-time basis, and according to the principal, "as of today we have an aide who comes in two hours to assist the teacher." The half-time coordinator supervised the distance education students "during the morning" and "looks after the coordination in terms of all the book-keeping, and keeps course logs in terms of their marks and how many lessons they've completed." During his half day, while he was supervising and coordinating, this teacher was also expected to tutor-mark 180 distance education course credits for the CEDEC consortium. The principal commented that, "we set down a hundred and eighty credits as being the acceptable load, so, in other words, I guess he's got an equivalent of a seventy-credit cushion for coordination [and classroom supervision]."

Issues

The principal showed concern for the overburdened tutor-marker/coordinator/supervisor and commented that the main issue with his school's distance education arrangements is

> Probably the time the teacher [coordinator] has available. I think that we've got to look at that again more realistically in terms of time. As I indicated before, today is the first day that this gentleman has had an aide to help him, and he was starting to get really overloaded. From an administration point of view, this is great: This guy's working full time, and he's only getting paid half time; but we do have to look after him. He came to me and said, "I'm just getting worked off my feet here. I'm getting further and further behind, and I just don't have the time to get all this stuff done." He said I'm working almost full time with the kids that I've got and I don't have time for marking."

The principal also put forward another issue which concerned the organization of distance education in schools and teachers generally. He commented that "on the one hand" distance education "has the potential to keep this school open, because we can offer the courses. On the other hand, teachers are concerned about how they'll be loaded with it, because it can be used as a money maker as well." The principal explained, at some length, that teachers with smaller classes and low pupil/teacher ratios could be asked to do outside tutor-marking to increase their ratio, and bring in more money for the jurisdiction. The principal related the following story about a teacher who was actually in that position.

> I was talking to a fellow that I think taught industrial arts up at _____, and he said, I've got ten in Shop 10 and twelve in Shop 20 and fourteen in Shop 30," or whatever, "and my pupil-teacher ratio is down, but in addition to those things I'm working full time. I have noon-hour supervision, I have recess supervision, I have extracurricular activities that I'm involved in. So I carry the full teaching load, and now, in addition to that, they want me to mark another twenty kids from other areas." And he said, "You know, that's simply not right."

Summary of Part 2

The purpose of the second part of this chapter was to describe the organizational arrangements and issues associated with the provision of distance education in schools in the Central East Distance Education Consortium. This case study was a large undertaking because of the many organizational facets identified and described by key participants. Their perceptions reflected the variety, and trial and error nature, of these recently implemented arrangements. The loose organizational structure of the consortium, and the consortium's deference to the autonomy and independence of participating organizations allowed a large amount of organizational creativity at the jurisdictional and school levels. Possibly this variation in the organizational arrangements throughout the consortium was to be expected at such an early stage of implementation.

Chapter 6

BIG SKY CONSORTIUM: ORGANIZATIONAL ARRANGEMENTS AND ISSUES

This case study describes the organizational arrangements implemented by the jurisdictional members of the Big Sky Consortium to provide distance education for senior students in small schools. It is the second of five similar case studies of three consortia and two autonomous jurisdictions. The following description is based on data from interviews of key participants in five jurisdictions and 10 schools in the consortium. The description of the organizational arrangements is supported by documentation, the researcher's observations, and guided by the two major study questions:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

2. What are the critical issues concerned with these organizational arrangements?

The chapter is in two parts; "Jurisdictional Arrangements" and "School Arrangements." Both parts address question one. Issues, which are the focus of question two, are dealt with as they arise throughout the context of the chapter.

PART 1: JURISDICTIONAL ARRANGEMENTS

The consortium context, and the jurisdictions and schools involved in the consortium, are described and outlined at the beginning of this section. These details are followed by a description of the consortium structure and management, and discussion of relevant issues identified by participants. The remainder of Part 1 is concerned with the key roles of the consortium coordinator, jurisdictional coordinator, and the tutor-markers. Each of these roles is also discussed in terms of issues identified by participants.

Consortium Context

The Big Sky Consortium officially began on August 20, 1990 when the Consortium Agreement was signed by a board member from each of the 10 jurisdictions representing a total of 22 schools. This recently formed consortium was managed by people with considerable distance education experience, and included jurisdictions and schools with well established distance education arrangements developed during the three years of the provincially sponsored Distance Learning in Small Schools Project in the south central region of Alberta.

This case study is based on a survey of 10 of the 22 schools and five of the 10 jurisdictions in the Big Sky consortium; two Paintearth County schools, four schools in the Three Hills School Division, one in the County of Stettler, two in the Rocky View School Division, and one in the County of Wheatland. Apart from the two Rocky View School Division schools, which were new to distance education, and the two Paintearth County schools, where distance education was in a state of renewal and reappraisal by a new administration, the remainder of the schools and jurisdictions exhibited similar stable states and practices established during the pilot studies.

The Big Sky Consortium management structure also reflected the centralized control of the earlier pilot project, and although the consortium had only recently been formed, its management lacked the unsettled nature and conflict found with the CEDEC operation. Big Sky's policy, financial, and operational arrangements were directed by an "agent board;" a management concept rejected by the CEDEC founders who were in favour of more autonomy for individual jurisdictions. In contrast to the CEDEC arrangements, Big Sky's management appeared to be operating smoothly and have unanimous acceptance and support of participants, at least during the early stages of implementation.

The Big Sky consortium covers an area of about 65,000 square kilometers, more than four times the size of the area represented by the CEDEC consortium. Big Sky takes in the south east section of Alberta; from Stettler in the north to Manyberries 300 kilometers to the south, near the Montana border; and from Calgary in the west to the Saskatchewan border 210 kilometers to the east. This area derives a good part of its economic wealth from the agricultural industry and the presence of oil and natural gas pumping stations, pipelines, and ancillary facilities. The many small communities scattered throughout this region are serviced by an extensive network of paved highways and rural roads. These roads are excellent in the spring and summer months, but like most rural areas in Alberta they are difficult for traveling and "busing" students long distances to larger high schools during the winter months of the school year.

A schematic map in Figure 6 and a list of the jurisdictions and schools in Table 7 are provided for clarification. Figure 6 indicates the position of the schools within the consortium boundaries, and underlining indicates the schools surveyed for this case study. In Table 7 the schools are listed against their jurisdictions, and underlining indicates the 10 schools and the five jurisdictional offices visited during the survey.

Figure 6

Map of the Big Sky Consortium

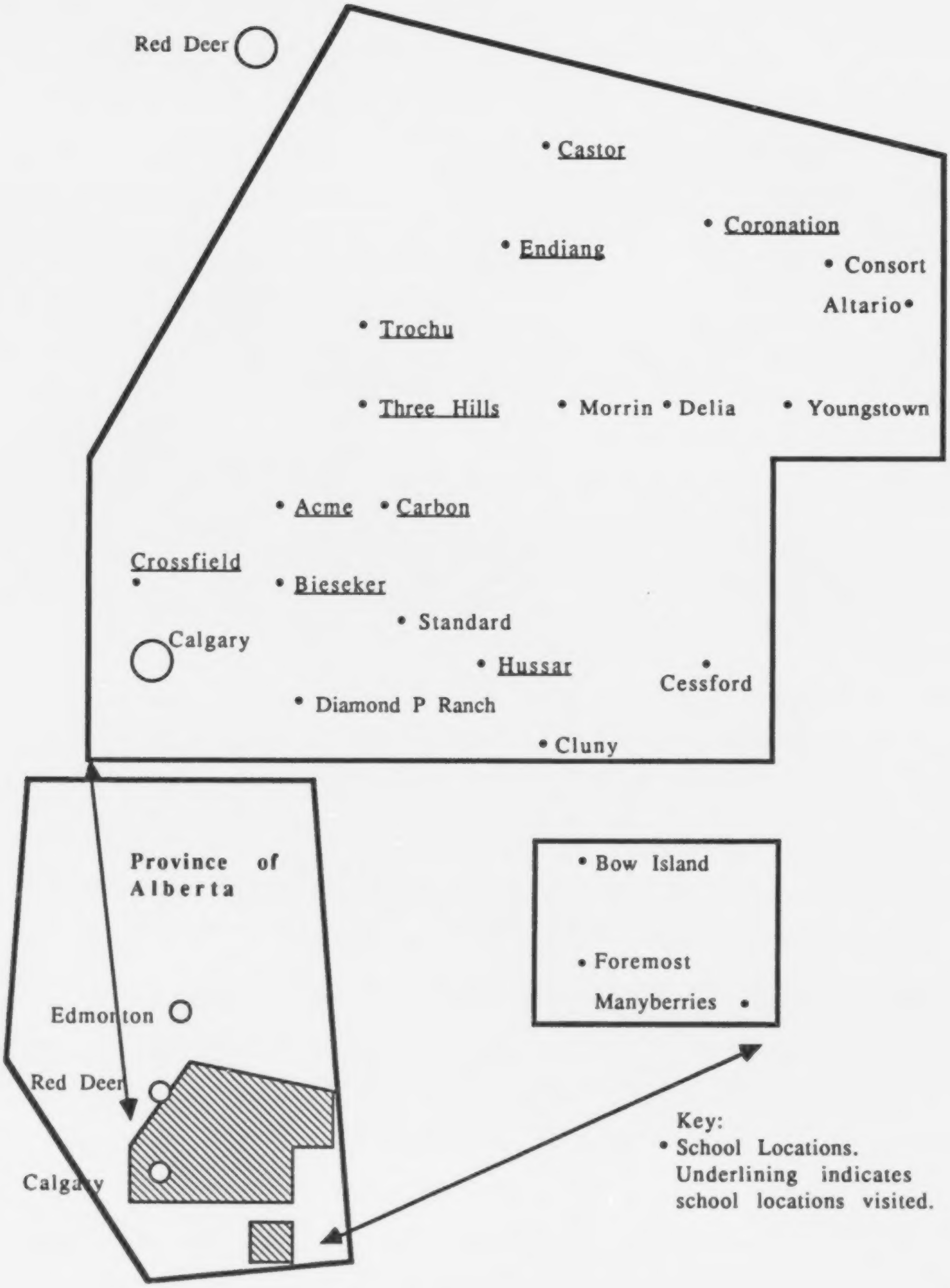
Red Deer
Castor
Coronation
Endiang
Consort
Altario
Trochu
Three Hills
Morrin
Delia
Youngstown
Acme
Carbon
Crossfield
Bieseker
Standard
Calgary
Hussar
Cessford
Diamond P Ranch
Cluny
Province of Alberta
Edmonton
Red Deer
Calgary
Bow Island
Foremost
Manyberries
Key:
• School Locations.
Underlining indicates school locations visited.

Table 7

List of Jurisdictions and Schools

Members of the Consortium	Schools
1. County of Paintearth	*Coronation School
	*Gus Wetter School (Castor)
2. County of Stettler	*Endiang School
3. Three Hills School Division	*Trochu Valley School (Trochu)
	*Three Hills School
	*Carbon School
	*Acme School
4. Rocky View School Division	*Bieseker Community School
	*W.G. Murdoch School (Crossfield)
5. County of Wheatland	*Hussar School
	Cluny School
	Diamond P Ranch School (via Strathmore)
	Standard School
6. Rangeland School Division	Youngstown School
7. Starland School Division	Delia School
	Morrin School
8. Neutral School Division	Altario School
	Consort School
9. Berry Creek School Division	New Cessford School
10. County of Forty Mile	Foremost School
	Manyberries School
	Senator Gershaw School (Bow Island)
Ten Jurisdictions	Twenty Two Schools

* Underlining indicates schools visited.

Consortium Management

When asked why his jurisdiction belonged to the Big Sky Consortium, a superintendent expressed the general view that, apart from the provincial educational authorities' encouragement to collaborate, it was necessary for small jurisdictions to share expertise and resources in order to minimize costs.

> I think that's been a provincial directive, and because they've chosen to fund consortia in the province. It would be, in our view, impractical not to associate in some way. It would be counter-productive for us to try to provide a distance education program with two high schools. So we have to associate with others in order to gain access to other tutor-markers.

To manage this association or collaboration of jurisdictions the Big Sky Consortium has three levels of government; the Trustee Committee, the Management Committee, and the Executive Committee. While each of the committees is expected to meet when necessary at the call of the chairman, the Trustee Committee is expected to meet at least once each year. The daily operation of the consortium is directed and managed by an Agent Board and a consortium coordinator. The roles and responsibilities of these committees, agency, and key individuals are described in the Consortium Agreement.

Consortium Agreement

The Consortium Agreement, included in Appendix E, formally binds the partnership and provides a framework for the management of the collaborative efforts of the 10 jurisdictions and 22 schools. Apart from omitting some important details about the tutor-marker arrangements, the agreement could otherwise be considered a concise and comprehensive model document.

As well as stating who may be a member of each committee, the agreement provides the basic policy, which explicitly outlines the functions and responsibilities of the Trustee, Management, and Executive Committees, the Agent Board, and the consortium coordinator. While the agreement deals primarily with the government of the consortium, and outlines the finance, indemnity, and membership termination and joining arrangements it ignores the tutor-marker arrangements. This deficiency was identified by Clark (1990) in a recent feasibility study for a prospective member of the Big Sky Consortium. Clark pointed out that although the tutor-marker arrangements are essential to the consortium's operation, the "Consortium Agreement lacks reference to a number of elements which will ultimately affect the quality of the program." According to Clark these elements include the duties, responsibilities, and authority of the tutor-markers, their workload, and training for new tutor-markers.

Trustee Committee

The highest level of the consortium's management structure, the Trustee Committee, has a school board representative from each of the participating jurisdictions. The essential elements of the this committee's responsibilities are listed in the agreement as follows:

> The Trustee Committee shall be responsible for developing policy for the operation of the consortium and providing direction to the Management Committee. . . . The Trustee Committee shall. . . meet annually for the election of a Chairman, approval of the budget, and conduct of such consortium business as shall be brought before the Trustee Committee at that time.

Management Committee

At the next level, the Management Committee is made up of superintendents or their designates from each jurisdiction plus the consortium coordinator. The responsibilities of this committee are listed as follows:

> The Management Committee shall. . . .
>
> (a) Review policy. . . .
>
> (b) Review and recommend to the Trustee Committee the annual report and annual operating budget. . . .
>
> (c) Review on an annual basis the position of the coordinator, and evaluate the incumbent.
>
> (d) Make recommendations. . . to hire the distance education teachers.

> (e) Consider and approve agreements with other persons or agencies for the delivery of distance education services.

Executive Committee

The Chairman and two other members of the Management Committee plus the consortium coordinator make up the Executive Committee and the third level of management. An edited version of this committee's executive responsibilities are listed in the agreement as follows:

> The Executive Committee shall:
>
> (a) Implement policy.
>
> (b) Present the annual report to the Trustee Committee before October 31.
>
> (c) Present the annual operating budget to the Trustee Committee before August 31.
>
> (d) Review the role and responsibilities of the Coordinator and make recommendations to the Management Committee.
>
> (e) Establish the need for distance education teachers (tutor/markers) and make recommendations to the Management Committee, and provide for the evaluation of the incumbent distance education teachers.
>
> (f) To review the distance education teachers' working conditions, including credit loads, conditions of local contracts, salary adjustments per semester and other conditions which may affect the distance education teachers.
>
> (g) Maintain Consortium records and statistics as required by the Trustee and Management Committees.

Agent Board

A superintendent described how this level of consortium management was agreed upon and arranged by the participating members.

> The consortium is organized by a host jurisdiction, that being the County of Wheatland at Strathmore. . . . It was discussed amongst a number of jurisdictions how it might be organized and they basically agreed that either Three Hills [School Division] or the County of Wheatland would host it, and in a straight vote the County of Wheatland got the nod. They've gone ahead, and they have the deputy superintendent assigned to the supervision of the consortium. The funding and the collection of fees and so on have been set up through the County of Wheatland.

In this first year of the consortium's operation, the County of Wheatland was chosen as the Agent Board, and its deputy superintendent was chosen to oversee the Board's operation. The deputy superintendent was also elected chairman of the Management Committee, and as such was also part of the Executive Committee. The County of Wheatland's role as Agent Board was outlined in the agreement as follows:

> The Agent Board shall. . . .
>
> (a) Supervise, accommodate and support (including salary and secretarial support) the Coordinator;
>
> (b) Provide the services of a Secretary Treasurer to the Consortium, including provision for an annual audit, Consortium payments and accounts, Consortium records and minutes, and any other secretarial and financial services as may be required by the Consortium Board;
>
> (c) Maintain the Consortium equipment. . . .

The importance of the Agent Board's pivotal financial role is described in more detail in the following section.

Financial Arrangements

Seven items, which comprehensively describe the consortium's financial principles and policy are listed in the Consortium Agreement, and the essential elements are described below. In the first item it was declared that "the consortium shall be financed on a cost recovery premise based on course credits delivered and received." In other words, the consortium's business of buying and selling distance education courses and services was expected to be financially self-supporting.

The second item concerned "start-up funding" for the Agent Board. Each jurisdiction was expected to pay $1000 for each of their participating schools. These funds were to be used for the initial costs of operating the consortium through the Agent Board, and returned to the jurisdictions as credits to offset their costs at the end of the first year of the consortium's operation.

The third item concerned course fees and control of these funds between the consortium and the jurisdictions. The fee for distance education courses requiring tutor-marker services, was set at $65 per credit. Each jurisdiction providing tutor-marker services was to be credited with $10 per course credit to cover the tutor-marker's paper, facsimile and telephone facilities, and telephone line charges. The actual cost of tutor-markers' salaries and benefits was to be paid by the consortium to the employing jurisdictions. So, instead of returning a set amount to a jurisdiction for each distance education course credit delivered, the consortium paid the basic costs of employing a tutor-marker. This system prevented jurisdictions from making a profit at the expense of others, but it allowed the consortium to make a profit, if there was one to be made, and to share the surplus funds among all consortium members.

The fourth item refers to the consortium's central role of buying and selling services. According to the agreement the Agent Board, in conjunction with the consortium coordinator, is responsible for determining course credits received and delivered, and payment of deficits and credits by the consortium and the jurisdictions. It was stated in the agreement that appeals against the Agent Board's calculations could be made to the Trustee Committee, whose decision "shall be final and binding."

In the fifth item it was formally recognized that the Agent Board was responsible for the salaries, benefits, and expenses for the Consortium Coordinator and any support staff, the purchase and maintenance of consortium equipment, and accounting and auditing expenses.

In the sixth item it was stated that all the costs associated with the employment of tutor-markers by jurisdictions were to be reimbursed from the distance education course fees. However, in the seventh item it was stated that each jurisdiction was responsible for the the hiring, supervision, evaluation, salaries, and benefits of tutor-markers which they may employ from time to time.

The consortium coordinator suggested that the feasibility of the consortium's financial arrangements had been based on the pilot project experience. However, according to the coordinator the enrolments in the first year of operation had exceeded expectations.

> It appeared that we'd be able to deliver a course at $65 per credit, and that would be sufficient to cover the consortium's costs. . . . When we figured out our budget at $65 per credit, if we had 3,600 credits for the year we would be able to break even. At this stage we've got 3175 for first semester and ten-month courses combined. I suspect we will have the same enrolment for the second semester, so we are going to be looking at about 5,600 credits for the year. This is much higher than our anticipated enrolment.

There was a suggestion by one respondent that the provincial distance education grant, provided for all eligible small schools at the beginning of the 1989-90 school year, had caused this increase in distance education, and provided the financial support for consortia. Commenting on this speculation the consortium coordinator explained that "because the distance education grant goes to the jurisdictions, our costs aren't based on the grant. Now, how much the jurisdictions would utilize the consortium if they didn't get the grant, I can't answer that."

Consortium Management Issues

Although most respondents expressed the view that there were no problems with the management of the consortium, one superintendent did draw attention to its the geographical size and possible problems with its coordination.

> As distance education grows and more jurisdictions become comfortable with the idea, it's going to be consolidated. I wonder about the distances involved here. Certainly, telephones don't matter where distance is concerned, but a coordinator has to cope with that distance. . . . It's an enormous territory for anyone to cover in terms of coordinating the tutor-markers, for instance. So I think we'll see consolidation of consortia into closer and more consolidated regional groups.

A jurisdictional coordinator also commented that, "probably a minimum of three or four jurisdictions are required to make this thing fly. You may find the Big Sky Consortium will split into northern and southern groups in the future."

A superintendent and member of the Executive Committee, whose jurisdiction had been involved with distance education since the start of the pilot studies in 1987, remarked that there were no major problems with the existing consortium arrangements.

> I haven't really found myself having to contend with any major issue. The kinds of concerns that we had were organizational in nature, and they had to do with our association in the consortium, and whether we could do this on our own and do as well.
>
> There was a bit of a problem last year with the availability of programs and resources, but that's not the sort of thing that persists. This year that problem has not been experienced to the same degree.
>
> In terms of seeing the distance education program operate over several years, there hasn't been any issue or problem that seems to be reappearing and that needs to be dealt with on a regular and routine basis.

Consortium Coordinator's Responsibilities

The essential aspects of the consortium coordinator's responsibilities were defined in the Consortium Agreement as follows:

> The coordinator, under the supervision of the Agent Board's Superintendent and in consultation with the Agent Board's Secretary Treasurer and the Executive Committee, shall be responsible for:
>
> (a) Conduct of the day-to-day business of the consortium;
>
> (b) Implementation of policy;
>
> (c) Resolution of operational issues;
>
> (d) Preparation of the budget and annual report;
>
> (e) Preparation of other reports and documents as required;
>
> (f) Establishment and conduct of distance education in-service as required;
>
> (g) Calculation of consortium expenses such as costs charged on a credit basis. . .
>
> (h) Such other matters as may be required for the effective and efficient daily operation of the distance education program of the consortium.

The coordinator was employed half-time to do the consortium's work, and explained that he was also the principal, distance education coordinator, and office person for a small junior/senior high school with only 10 senior students. In response to a question about this work load, he facetiously remarked "I'm crazy," but added that, "I've got such a strong commitment to distance education; that's why I'm doing it all. I feel that somebody has to get it started and show that it will work." The coordinator described his involvement as follows:

> I started with distance education three years ago with the Distance Learning in Small Schools Project. I was just the school administrator and coordinator at the time, but through my involvement I became very interested and applied for the position as coordinator for the consortium. In that position I now sit down and come up with policy, establish policy, implement policy and see that it's followed through. We have an Executive Committee, which won't be meeting until the nineteenth of November. All the policy decisions that will be made up until then will be made by me, with the support of the Chairman of the consortium, who is the deputy superintendent of the Agent Board. A comment was made at the first Trustee's meeting in August, that they would like me to take the ball and run with it on my own if at all possible, and I said fine, I'd give it a try.

Issues

Time. The coordinator stated that, "the biggest problem I've found so far is that it's a half-time position, and I'm trying to do more than a full-time job in a half-time slot, and it's made it busy." Because the consortium's 22 schools are spread over such a large area, visiting each school at the beginning of the school year was in itself a time-consuming and demanding task. The coordinator commented,

> It's a round trip of a couple of days to Manyberries, but I try to catch the three schools in that area plus the tutor-marker. It would be an 820 kilometer round trip by the time I'm down and back. . . . In terms of my job as a coordinator it makes it difficult.

Leadership. Leadership was not seen as a problem by the coordinator, but it was an issue, or element of his role, which influenced the "smooth" operation of the consortium.

> I look back at some of the things that have happened in the past two or three months, such as tutor-markers who were dissatisfied, and by sitting down and discussing their problems with them, I was able to defuse the bomb, so to speak. I was able to sit down and talk to tutor-markers and school principals about their differences, and find out about their problems. Later I'd go back and say, "Okay, this is what I would like you to do." Last year [before the consortium began], they were getting very nasty with each other. Now those individuals are getting along and saying "please" and "thank you."

> The reasons the problems cropped up in the past was because there wasn't somebody they could go to. This year they know there is somebody they can go to who is going to make a decision, and they know that they have to abide by that decision and try it first before they come back to me again.
>
> I'm thinking of three different tutor-markers and about four schools, where some of these problems had come up. It was a misunderstanding of the role of the other in most cases, because each wanted to be boss, not knowing who was supposed to be boss. So by them coming to me, knowing that, in quotes, "I'm the boss," they expected me to sort out their problems and I did!
>
> Without a lie, I think you can ask any one of the tutor-markers, any one of the superintendents, or any one of the principals, which comes to 44 different people in this consortium, and every one of them will say it's been the smoothest startup period that they've experienced yet in distance education. I break my arm patting myself on the back, but it's true.

Jurisdictional Coordinator/Representative's Role

The term jurisdictional coordinator was not used in the Consortium Agreement, but this position was referred to as a "representative" of a jurisdiction, or "the Superintendent of Schools or his designate." As one superintendent remarked "I'm not the coordinator, and we don't really have anybody else doing that on a jurisdictional basis, because the consortium employs a coordinator who coordinates throughout the consortium and the consortium schools." While the name itself is not important, the lack of emphasis on the jurisdictional coordinator's role, and the implications for the management of this consortium are important. In the previous case study of CEDEC, the jurisdictional coordinator was seen as the champion of the jurisdiction's autonomy and independence, and as part of the Coordinating Committee, the jurisdictional coordinator was a central figure in CEDEC's management. This role appeared to be far less significant in the management of the Big Sky Consortium. Although the Management Committee was made up of the 10 jurisdictional representatives, they did not appear to exert much influence on the day-to-day operations of the consortium.

Two months into the school year, and three months after the official beginning of the consortium, the 10 jurisdictional representatives had not met as members of the Management Committee to discuss the operation of the consortium. It appeared that the jurisdictions were prepared to relinquish some of their autonomy and allow the consortium coordinator, with the support of the Agent Board and the Executive Committee, to make decisions, with the understanding that they would be discussed and probably ratified later by the higher level committees.

The Executive Committee was made up of three superintendents, who acted as advisors to the consortium coordinator rather than as advocates of the partisan interests of each jurisdiction, as it appeared to be the case in the CEDEC organization. As the consortium coordinator explained, so far all the policy decisions "have been made by me." This situation was confirmed by a jurisdictional representative who expressed his appreciation for the efforts of the consortium coordinator and the Executive Committee, and remarked "they are formulating policy right now. . . and they'll meet several times before the Management Committee meetings and establish policy that we can entertain."

This system of empowering the consortium coordinator to make decisions with the advice and support of the members of the Executive Committee, seemed to reflect the intentions of the Consortium Agreement. The agreement clearly indicated that the jurisdictional representatives, as members of the Management Committee, should be concerned with reviewing and recommending decisions made at the lower level, and not necessarily concerned with initiating policy.

Tutor-Marker Arrangements and Role

In a report to the Provincial Advisory Committee for Distance Education on October 25, 1990, the consortium coordinator stated that, "the tutor-markers seem to come from several walks of life. Some are classroom teachers, some are teachers who work at home on a part time basis, while others are retired teachers who have a strong interest in education." At this time there were 12 tutor-markers employed by seven of the consortium's 10 jurisdictions. According to the coordinator,

> We've got a whole bunch of them. I've got one home economics, one fine arts, and three who are part-time mathematics teachers and part-time tutor-markers. I've

> got an industrial arts fellow who is in a school, but he is basically a full-time tutor-marker. I've got two in business education; both of them work at home, but neither of them is over half-time. . . . And then I've got one science and one English-French teacher; they're both retired teachers who work at home on a full-time basis. I've got one in social sciences who is down at Manyberries, and his enrolment is very much like the industrial arts fellow. He's in a school, and I think he picks up point two time as a coordinator and point one in a class. . . . I've got a German tutor-marker who is part-time. He's a retired teacher who is running a restaurant.

Unlike CEDEC, Big Sky's financial arrangements do not depend on each jurisdiction employing their quota of tutor-markers to minimize their costs. The employment and deployment of tutor-markers in Big Sky is a consortium management decision, and depends on the consortium's needs and not on the jurisdiction's artificial need to fill a quota, or provide work for under-utilized staff members. The consortium coordinator and the Executive Committee have the responsibility to establish the need for a particular specialist teacher and make the recommendation to the Management Committee to employ such a teacher as a tutor-marker. Although the Executive Committee decides which tutor-markers to employ, the local jurisdictions are responsible for hiring, supervision, evaluation, salaries, and benefits. The consortium coordinator explained that, "the tutor-markers are signed on by the jurisdictions, and we reimburse to the jurisdictions the FTE (Full Time Equivalent) salary according to the grid plus their benefit package." A jurisdictional coordinator commented that,

> It's a matter of whether the county or the jurisdiction wish to get into the tutor-marker role, and what commitment they want to put into that role. There is no requirement that they provide tutor-markers; the tutor-markers are usually sorted out by the the Big Sky Consortium. If a jurisdiction wishes to provide one, they have the opportunity to take a regular classroom teacher out and make him a tutor-marker and facilitator of distance education.

The consortium coordinator explained that there was no attempt to deploy tutor-markers throughout the consortium. "When we needed a German tutor-marker, I asked, 'Who's got a German tutor-marker?" and we all looked around until we found one. It was a matter of who came up with one first." The coordinator commented that there was no problem in finding suitable tutor-markers, and no need to advertise. "We didn't have to advertise this time because we had them all in place from the old pilot project. As we run out of tutor-markers then we'll advertise in the regular manner, but we still have a number of applications on file."

Issues

As with the previous case study the tutor-markers' credit load, working conditions, and payment once again emerged as important issues.

Credit load. According to the consortium coordinator the full time tutor-marker load is 500 credits per semester. At least one respondent expressed the view that a 500 credit load was far too much work for a teacher to mark properly, and allowed little or no time for tutoring students. According to a distance education coordinator, "we are not making enough use of the tutoring aspect of our tutor-markers' positions. They are given so many students to correct lessons for that they only have time to be markers." Similar to the previous case study the point was made by several respondents that different subjects such as English, mathematics, and French required varying amounts of time for tutoring, marking, and teleconferencing, and that this differential loading should be considered when allocating the work of tutor-markers.

Working conditions and payment. In the previous consortium the tutor-markers' working conditions and payment were the sole responsibility of the jurisdictional employers. Instead of leaving these matters to individual jurisdictions, Big Sky's Executive Committee is bound by its agreement to oversee the tutor-markers' payment and working conditions. The committee's responsibilities are stated as follows: "To review working conditions of the distance education teachers including credit loads, conditions of local contracts, salary adjustments per semester, and other conditions as may from time to time affect distance education education teachers."

The problem is that the details, or an essential outline, of the working conditions and payment are not formally stated in the agreement or associated policy documents, and are left to the discretion of the Executive Committee. As stated earlier from Clark's (1990) feasibility study, the role, work load, and conditions of employment should be included in the Consortium Agreement.

Summary of Part 1

Part 1 of this chapter dealt with the consortium's management structure, roles of key participants, and related issues identified by participants. Although this consortium was officially in the early stages of implementation, its stable and established nature reflected its involvement and evolution from the pilot project which operated for three years before the formation of the consortium.

Most respondents expressed the view that they were satisfied with the consortium management and arrangements, but identified three issues. The first concerned the geographical size of the consortium. A superintendent suggested that, because the 10 jurisdictions and 22 schools were spread over such a large area, coordination was difficult and survival of such a large organization was unlikely.

In some ways the second issue was related to first. The consortium coordinator expressed concern about the amount of work involved with coordination, which he believed was a full time work load, but was allocated only a half time position. The coordinator's excessive workload was caused partly by the unexpected demand for course credits which were almost double the number initially planned for by the consortium organizers.

The third issue concerned the work of tutor-markers. It was suggested that the tutor-markers' workload of 500 credits per semester was excessive and allowed little or no time for tutoring students. Clark (1990) indicated that while the tutor-markers' duties, responsibilities, authority, workload, and training were essential to the consortium's operation, there was no reference to them in the Consortium Agreement.

PART 2: SCHOOL ARRANGEMENTS

The distance education arrangements for the 10 schools from five jurisdictions are summarized in Tables 8, 9, and 10 in the order they were visited during the survey. The organizational elements in the left-hand column, the numerical approximations of students, course registrations, and course credits, and the "yes" tabulations were all derived from interview data. The "yes" tabulations provide an overview of the existing school arrangements according to the information provided by participants. While these tables may not be complete or exact, they appear to reflect certain trends within each jurisdiction and school. For example, the numerical values for the number of high school students, distance education students, and course credits, generally reflect the extent of acceptance, and the extent of the impact of distance education on each school and jurisdiction.

The tables indicate that the tutor-marker or "Multi-School" model has almost completely replaced correspondence--referred to as the "ACS (Correspondence)" model in the tables--which had been used extensively in many of the consortium's schools before the distance education pilot project began in 1987. The "Computer-Based (CML)" model has not been implemented in any of the consortium's schools, partly because of the costs involved and because of the expectation that a better and cheaper system will be available in the near future. In Clark's (1990) feasibility study, referred to previously in this chapter, he wrote,

> Given the capital cost of acquiring the system is approximately $23,000 per system, plus a substantial annual service contract, it is not being recommended in this report. Alternatives to the Digital Micro-VAX system for CML are being sought, and if a less expensive system becomes available, it should be considered in the future. (p. 17)

The tables also indicate that the "Multi-Subject" model, which involves the facilitation and marking of the distance education material by a classroom teacher, was not used in any of the schools surveyed in this consortium.

Most respondents indicated that curriculum expansion and provision of courses to satisfy individual student needs were the main reasons for using distance education.

Respondents in schools which had only recently implemented distance education also indicated that the opportunity to access distance education funds had influenced their involvement.

Other organizational elements identified by respondents concerned supervision, scheduling, coordination, clerical assistance, and support for students through teacher advisor arrangements. These elements, and other aspects of each school's distance education arrangements listed in the tables will be supported by interviews with participants, documentation, and observations by the researcher in the following discussion and description.

Table 8

School Arrangements in County of Paintearth and County of Stettler

Data[1] For:	Paintearth School 1	Paintearth School 2	Stettler School 1
High School Students	~100	~120	10
D.E. Students	8	36	~20
D.E. Course Credits[2]	~30	~200	~100
D.E. Models:			
ACS (Correspondence)	--	--	--
Computer-Based (CML)	--	--	--
Multi-Subject	--	--	--
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	--	--
Curriculum Expansion	--	Yes	Yes
Curriculum Enhancement	--	--	--
Personalized Learning	--	--	--
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	--	--	--
D.E. Room/Dedicated Facility	--	Yes	Yes
D.E. Students Timetabled	--	Yes	Yes
D.E. Supervision:			
Scheduled Teacher	--	Yes	Yes
At the back of other classes	--	--	--
School Coordinator:			
Principal	--	Yes	Yes
Assistant Principal	--	--	--
Teacher	--	--	--
Teacher's Aide	Yes	--	--
Clerical Assistance	Yes	Yes	--
Teacher Advisor System	--	--	--

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[1] As of September 30, Semester One, 1990/91.

[2] Registrations and credits do not include CML.

Table 9

School Arrangements in Three Hills School Division

Data[1] For:	School 1	School 2	School 3	School 4
High School Students	~100	~100	~40	~72
D.E. Students	~36	~60	~40	~54
D.E. Course Credits[2]	~120	~500	~420	~450
D.E. Models:				
ACS (Correspondence)	--	--	--	--
Computer-Based (CML)	--	--	--	--
Multi-Subject	--	--	--	--
Multi-School	Yes	Yes	Yes	Yes
Reasons Given For D.E. Use:				
Curriculum Enrichment	--	--	--	--
Curriculum Expansion	Yes	Yes	Yes	Yes
Curriculum Enhancement	--	Yes	Yes	--
Personalized Learning	--	--	--	Yes
Individual Student Needs	Yes	Yes	Yes	Yes
To Access D.E. Funds	Yes	--	--	--
D.E. Room/Dedicated Facility	Yes	Yes	Yes	Yes
D.E. Students Timetabled	Yes	Yes	Yes	Yes
D.E. Supervision:				
Scheduled Teacher	Yes	Yes	Yes	Yes
Back of other classes	--	--	--	--
School Coordinator:				
Principal	Yes	--	Yes	--
Assistant Principal	--	--	--	Yes
Teacher	--	Yes	--	--
Teacher's Aide	--	--	--	--
Clerical Assistance	--	Yes/Student	--	Yes/Student
Teacher Advisor System	--	--	--	Yes

---

[1] As of September 30, Semester One, 1990/91.

[2] Registrations and credits do not include CML.

Table 10

School Arrangements in Rocky View School Division and County of Wheatland

Data[1] For:	Rocky View School 1	Rocky View School 2	Wheatland School 1
High School Students	~100	~125	29
D.E. Students	8	10	~18
D.E. Course Credits[2]	30	53	~65
D.E. Models:			
ACS (Correspondence)	Yes	Yes	--
Computer-Based (CML)	--	--	--
Multi-Subject	--	--	--
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	--	--
Curriculum Expansion	Yes	Yes	Yes
Curriculum Enhancement	--	--	--
Personalized Learning	--	--	--
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	Yes	Yes	--
D.E. Room/Dedicated Facility	Yes	Yes	Yes
D.E. Students Timetabled	Yes	Yes	Yes
D.E. Supervision:			
Scheduled Teacher	--	--	Yes
At the back of other classes	--	--	Yes
School Coordinator:			
Principal	--	--	Yes
Assistant Principal	Yes	--	--
Teacher	--	Yes	--
Teacher's Aide	--	--	--
Clerical Assistance	Yes	Yes	Yes
Teacher Advisor System	Yes	Yes	Yes

---

[1] As of September 30, Semester One, 1990/91.

[2] Registrations and credits do not include CML.

County of Paintearth

The two schools in the County of Paintearth were surveyed during the first week of October 1990; two months into the school year and the fourth year of this jurisdiction's involvement with distance education. Although both schools had been part of the initial distance education pilot studies which began in September 1987, and were small enough to qualify, neither school was currently eligible for the provincial distance education grant because the local "tax base" was too high. Consequently the jurisdiction was expected to pay all its own distance education expenses.

The different distance education arrangements in the two schools had been established under a previous administration. A new superintendent was appointed in May, 1990 and new principals were appointed to both schools just before the beginning of the 1990-91 school year. After only two months of the school year the new administration was still "feeling its way" and had not attempted to make any major changes to the contrasting distance education arrangements found in each school. The administrators acknowledged there were differences and deficiencies with their distance education systems, but were prepared to wait and gain a better understanding before evaluating and possibly changing the school arrangements.

First School

The first school surveyed in this jurisdiction had a high school enrolment of approximately 100 students, with eight of these students taking a total of 30 distance education course credits. The school coordinator, who was also a teacher's aide, explained the limited nature of the distance education program as follows:

> We're using distance education as a fill in for kids who are coming in from other jurisdictions or other provinces, for those who need to catch up and get courses they've missed, and for one reason or another aren't able to take a course with a specific teacher, but that's monitored very closely.
>
> Three years ago when we started distance education, students were taking courses such as psychology, law, and those kinds of things. We found it didn't

> work well for us because too many kids were taking options just to gain extra credits. They were the kids who weren't motivated and had an awful lot of trouble completing their courses.

According to several respondents, the previous principal vigorously opposed the concept of distance education. He provided no teacher supervision for students, and because of the inadequate course completion rate eventually reduced and restricted the use of distance education. Because distance education was taking students away from the traditional courses, it was seen as a threat to the established school organization and program. The new superintendent suggested that the previous principal's determination to maintain the status quo in "the smaller school" had shaped the restrictive distance education arrangements which exist now.

> In some respects the smaller school has more difficulty maintaining its programs with kids opting out of regular classes to go into distance education, so in a sense the smaller school has coerced kids, if you can use that term, into pretty stock and standard programs just to maintain those programs.

The only students who were allowed to take distance education courses in this school were the "more able and motivated" grade 12 students who required courses to complete their diploma, or those with special needs. At the time of this survey eight students out of a high school total of about 100 were taking courses by distance education. The eight students were enrolled in one of the following courses: German 10, Biology 30, Typing 30, Accounting 30, Mathematics 30, or Mathematics 31. The coordinator explained that distance education courses were provided only under exceptional circumstances and to accommodate the extraordinary needs of students.

> German isn't offered here, so we have a German 10 student. . . . We don't have enough students to offer a Mathematics 31 class, and our Mathematics 30 student is no longer in the school. She graduated last year, but missed her Mathematics 30 and is taking it by distance education. . . . She works full time, but brings her lessons in to be faxed. I set up her exams at night under the supervision of our mathematics teacher. When she has trouble she comes in and gets tutoring from the mathematics teacher as well.

The distance education students were neither scheduled into a class nor supervised by a teacher, and their success depended very much on their own commitment and self-discipline. The coordinator described these arrangements as follows:

> Most of the students taking distance education have an 80 minute or a 40 minute spare, depending on their timetable. If it's a five-credit course, they have an eighty minute block [each day] to work on it, and they're free to work at home, in the library, or wherever they choose. As long as their lessons are in on time, they're not bothered or checked on, but if they are having any problems they come to myself or a classroom teacher who has expertise in their field and work out extra help themselves. It's fairly loose.

Although the supervision arrangements were "fairly loose," the school coordinator expressed the view that because distance education was restricted to the more able and self-motivated students, "the way it's organized now it's working very well." The coordinator explained that,

> Three years ago when distance education was first offered, it increased the number of courses, but with the high drop-out and low completion rate we had, it wasn't a good method of education for us. Part of the problem was the way it was set up. It wasn't done in a classroom with a teacher; the kids weren't accountable in any way; and it needed to be a lot tighter.

The coordinator commented that the distance education arrangements had "changed a lot over the three years" and that she had been hired "specifically" to do the clerical work with distance education. This work was still the responsibility of the school coordinator, but had been reduced considerably. The coordinator/teacher's aide explained:

> I'm a full time teacher's aide, but now I use only four periods a week for distance education [coordination]. . . . I organize the courses, get the course materials in, set up the students' schedules for submitting their lessons, I do the faxing and give their lessons back, and I do the typing timings once a week.

The coordinator could not identify any issue that still needed to be addressed in this school, and stated that, "as far as I'm concerned it's working very well," and distance education "takes up the slack" and provides students with the opportunities to do courses "they're not able to get here."

> Our markers are working out very well, our turnaround rate is good. . . . The parents of the kids who have been able to pick up their courses and complete them here have been very supportive and glad of it, and they've been taking an active part in cooperating to see that lessons are in and that kids are prepared for exams.

Second School

The second school had an enrolment of approximately 120 high school students. About 36 of these students were taking a total of 200 distance education course credits each semester, or six times the number of credits offered in the other school in this jurisdiction.

According to the principal of this larger school, the established arrangements and the differences between the schools had little to do with the present principals because "we're both new." The existing arrangements were a result of "the previous administrations' view of distance education, and the support it received [in each school] was quite different."

The principal of the larger school commented that, "we certainly are committed to improve it and make it as viable as possible and then evaluate it after one or two semesters, because it's a fairly costly exercise and endeavor for the county." The present situation was described by the jurisdiction's superintendent "as very experimental, very testing at this point." The superintendent added that,

> After this year we're going to have to sit down and look at it very carefully. . . . We realize that you can't be totally open-ended and say to kids, "Take whatever you want; the menu is yours," but that's what we've done. We're going to have to be careful, but. . . experimentally I don't think you can do it any other way.

The extensive use of distance education in the larger school exhibited a fairly open approach which allowed students to choose any of the distance education courses available providing that they were prepared to pay the fees determined by the jurisdiction. The principal described these arrangements as follows:

> There are 36 distance education students in each semester, and they fit into three categories: Students who are in the general diploma programs and pursue courses with very low enrolments. Students who wish to repeat an academic subject for the advanced diploma because they have failed it or wish to upgrade their marks, and maybe have a timetable conflict. The third group--they seem to fall into equal thirds--consists of students who pursue programs that we don't offer because of lack of expertise or low enrolment.
>
> The only restriction is that if the course is offered within the school they must take it in the school, but the "must" component is part of the county's policy.

Because this jurisdiction was responsible for all their distance education costs, the administration had in turn emphasized the responsible use of distance education courses by students. The county's policy required students to pay a refundable deposit, or in some circumstances pay the full cost of a distance education course. According to the principal, a distance education course costs five times as much as a course offered in the school. Consequently the student fees depended on whether the course was available and accessible to the student in the school.

> Students pay five dollars a credit, which would be 25 dollars per five-credit course, but they pay 30 dollars a credit, or 150 dollars for a five-credit course if it's what we call an option, or in other words, if they could take it at the school. In the first instance the fee is reimbursed if they complete the course, but in the second instance it's not reimbursed. So they can take a distance education course even if it's offered in the school, but it's at a considerable cost to the student. . . . The jurisdiction picks up the cost for the non-option and for those students who have a timetable conflict, but students pay the full $150 for an option.

The principal, who was also the school's coordinator, had three distance education roles which allowed him to monitor this innovation at the school, jurisdiction and consortium levels. The principal/coordinator stated:

> Number one, I represent the county as the jurisdiction's representative on the consortium's Management Committee instead of the superintendent, who is unable to make the meetings. As the principal of the school I am involved in programming and timetabling, and then I act as the coordinator of distance education within the school as well.

The school arrangements involved counselling, scheduling, and monitoring the distance education students. A staff member was employed in the school as a three-quarter time tutor-marker and quarter time distance education supervisor. Other teachers also supervised distance education students, and a teacher's aide assisted with the clerical work. The principal/coordinator explained:

> We have a tutor-marker in our school who facilitates industrial education for other students in schools throughout the consortium. The tutor-marker also acts as a supervisor for our distance education students.
>
> For each student who wants to do a distance education course, I go through their timetable with them and if they have free time then I schedule that student into the distance education room supervised by the tutor-marker or some other teacher.

> We also have a teacher's aide who helps with distance education four hours a day coordinating, recording, scheduling and facilitating the communication both ways between the students and the tutor-markers.
>
> We don't do any of the teaching, although there are a few teachers who may help the students should they require assistance.

Although this school was large enough to provide a broad curriculum of core and elective courses, the principal suggested that the school had difficulty providing the various levels of courses for all the advanced and general diploma students. The principal commented that while students did not have to take distance education courses,

> We don't always have the second and third level courses offered as part of our program. For instance, we have the diploma course in English, but we don't have English 13. We offer Science 10 and 14, but don't offer Science 16.
>
> Students are able to complete courses that are not available in the school, or reschedule courses because they've failed or got a low score. It gives them the flexibility of filling a timetable and perhaps still completing a three-year program in three years.
>
> They can even complete the work at home and then just bring the lessons in the be faxed. There are several students who have a full timetable load and take a three or five-credit course as an extra to get their full hundred credits at the end of the three years and still graduate.
>
> In fact, one student from Scotland came at the end of grade 10, partway through grade 11, and has taken a tremendous load. He's quite bright and has taken 130% or 140% of the course load a regular high school student would take, and he'll get his diploma in two years as opposed to three years, and distance education has been able to help him that way.
>
> Just now we're starting to get the student who has had some organizational difficulties comfortable with distance education. They have some difficulties organizing themselves, and one of the key factors is attendance. We've had to create some policies where attendance is mandatory in the school, and then through that they've been able to organize themselves to complete their lessons. . . . The students are scheduled into the distance education room and supervised by a teacher. The lessons are expected to be completed according to a schedule, and if they're not they receive zero for that particular lesson, so there's some motivation to get it done on time.

Issues

The principal did not identify any major issues, but rather listed a number of minor matters.

> I think the scheduling of student time, attendance, completion of assignments, acquiring the communication facilities such as fax machines, telephone lines etc. which are not complete, those are the things that still present some problems for us. Space has also been a problem for us. . . . By expanding the program, it's been a burden to us in a physical sense because we had to create a distance education room and we don't have space for that.

The superintendent identified financial, pedagogical, and technical matters as the major issues. The financial problems were described as follows:

> Because the board picks up the cost of distance education, and we've left it open-ended, but what we're discovering is that it could get out of hand: We could be spending a tremendous amount of money. . . . We're not eligible for a grant because grants are provided on the basis of something called equalized assessment, and we don't qualify. We have large power plants in our jurisdiction. Eighty percent of our tax is industrial. In a rural agricultural community that's hard to understand, but we take a tremendous amount of tax from pipe and power.
>
> I think the provincial government is the problem, and the real critical issue is funding. It looks like this jurisdiction is rich because we have an equalized assessment in excess of the baseline. In fact we don't operate with more money than other jurisdictions. Although the land-value taxes are lower in this county than in neighboring counties, we would have to increase the tax base to get more money and taxpayers everywhere just don't buy into that.
>
> We think it's a little bit unfair that with distance education we're just knocked off arbitrarily because of certain phenomena that go on here, particularly when they're also threatening to take the equalized assessment away from us through this equity pooling issue. . . . The equity issue is corporate pooling, where they are threatening to take the industrial tax base and pool it into a large [provincial] pool and then divvy it out from there, instead of allowing it to go to the jurisdictions in which the industries function.

The superintendent commented that although funding was "the most significant issue, he recognized that "the bottom-line issue is an educational one."

> Can students learn as effectively with distance education as they can being taught in a classroom? I just know they can't; I just know that you'll never replace a teacher in the classroom with a distance education model unless the technology and the teaching components become much more effective than they are now.
>
> In Washington and Oregon they're using satellite connections, visual two-way communication, audio-visual communication, to teach some things. I think that's a quantum leap from where we are in Alberta, and I don't think that will happen in Alberta because of funding, because it will take megabucks to do it. [In Washington and Oregon] they are being funded by private enterprise, and time on the satellite is being donated by people who own the satellite. That doesn't appear to be the way education works in Canada.

County of Stettler

The only school involved with distance education in the County of Stettler is unusual because of its situation and size. With only 10 senior students, it is probably one of the smallest high school enrolments in the province, but with about 100 distance education course credits per semester, relative to its size, it is probably the biggest user--per student--of distance education in the province of Alberta. The principal, who is the school's distance education coordinator and the consortium coordinator, explained why distance education was being used, and why the high school program was important to Endiang.

> The reason it's used here is to keep the school a viable system. Without distance education we wouldn't be able to offer a high school program that would be sufficient to keep the students here. So distance education has kept the school open and we don't have to bus the kids out, although they still have the choice of being bused out to other schools. The nearest high school would be Hanna, which is 50 kilometers away. Without distance education, students would have to move out to other schools and by doing that it effectively removes them from community life.

The principal/coordinator added that the school had tried correspondence, but "the turnaround time is just horrendous out here." The principal commented that "we're not big enough to go alone. . . . Limited staffing doesn't allow us the expertise to teach all the various subject areas." Of the 75 diploma courses offered by ACS, the consortium was able to offer tutor-marker services in 64 courses to a small school such as Endiang.

The principal expressed the view that although distance education had expanded his school's curriculum significantly, with such a small number of students the organization of the school had not been affected.

> It hasn't affected it really. It has only increased the number of courses available. We've always had a high school class; it's just that now we aren't limited to a maximum of two different courses per period. As you saw this morning in the mathematics class there were four different mathematics courses going on at the same time. Through distance education we are able to offer a much wider variety of courses. In terms of the organization of the school day, the organization of the student times, there hasn't been any change.

All the high school students took distance education courses. The principal explained that, "grade 10 students take two courses, the 11's take two or more courses, and the 12's presently take all their courses by distance education."

> Our school is set up on a 10 month system and students in 10 and 11 have the opportunity to do 42 credits. Of those 42 credits, 10 of them are by distance education, so 75% of their courses are by in-school, traditionally taught classes, and 25% are taken by distance education. The grade 12's take five credits of physical education in the school, and all the other courses are taken by distance education. Their needs vary, but I suspect they will take about 30 distance education course credits during the year. These particular grade 12 students we've got right now are trying to get university entrance, advanced diploma standing, so that's why they're taking such a heavy credit load.
>
> They've got to be reasonably self-motivated. They always have supervision here, but they still need to be reasonably self motivated to succeed because there's a lot of work in independent study.
>
> In some instances it's made grade 12 available to them, whereas without distance education they would have quit. In other instances it's provided a program in the high school which suits their interests as opposed to the cut-and-dried courses that were offered before. In some instances it's allowed them to stay at home and complete their diploma. Because it's a student-oriented concept that's being used, it's been much to their benefit.

Issues

When asked, "What issues or problems still needed to be addressed with respect to the distance education arrangements within this school?" the principal replied,

> Like I said, I have no problems with the way its going here. The students seem quite happy with it, the parents seem happy with it, and the school board seems happy with it. If they're all happy, I'm not going to change it. . . . If I can't set it up to run as it should then we're in trouble, especially when I'm the coordinator for the consortium.

Three Hills School Division

The Three Hills School Division has four schools with a small high school component which varies between 101 to 42 students. Because of the size of the schools the traditionally taught curriculum was limited and in the past had been supplemented with correspondence courses. The principal of the largest school with 101 senior students commented that, "we probably had 40 or 50 students taking one or more correspondence courses each year, but we had very few completing them. We might have had a 10% completion rate." At the end of the first year of distance education in this school the completion rate had risen to 87%, and the average completion rate for the four schools was even higher at 95% (Alberta Education, Feb, 1990). The superintendent also explained that the results for distance education courses compared favorably with the marks for course taught in a traditional classroom.

> We've attempted to compare the final marks for live-instruction courses with the marks for distance education courses, and found that they compare favorably. . . . With the kind of monitoring and supervision that goes on with distance education programs, more students complete courses and more students complete them successfully, compared to correspondence programs.

According to the superintendent, the opportunity to successfully expand the curriculum in their schools had influenced the board members' support for distance education.

> Our board has a strong feeling toward distance education. We have four high schools and they are all on distance education. Because of the size of our schools, we're not able to offer the diversity of programs the students would be able to get at a city school. So, we feel if we want to give students a reasonable variety of courses, then distance education is the way to go.

The jurisdiction's four schools joined the Distance Learning in Small Schools Project at various time during the projects three years of operation. Carbon School was part of the Distance Learning project when it began in 1987, and Acme joined in September 1988. Trochu Valley and Three Hills schools had declined their first opportunity to join the project in 1988, but were brought into distance education upon the insistence of the superintendent and the school board in 1989 at the beginning of the pilot project's third year.

Although distance education had been operating in this jurisdiction for three years, according to the superintendent, "we are [still] looking at distance education and administering it as a pilot project, simply because it's a new and innovative approach to education." It had taken the jurisdiction three years to develop and formally accept its distance education policy. The superintendent commented that the jurisdictional policy "with its associated guidelines and procedures was formally adopted by the board at the last board meeting." The superintendent added,

> We've had some operational guidelines before the actual policy statements were put in place. We took that approach because the operational statements allowed us to modify our practices on a fairly regular basis, and when we were satisfied and comfortable with the established direction and procedures, then we developed a policy.

The policy is very brief and leaves the organizational arrangements of distance education to the in-school administrators. However, the policy is based on the premise that distance education courses "are considered to be supplementary to the courses taught 'live' by jurisdictional staff, and are made available to students. . . in a fashion to complement and augment existing programs of instruction." This statement was supported by the qualification that, "students will continue to be encouraged to register in courses/programs taught by subject area teachers in the school." Irrespective of this cautious approach to distance education, one principal commenting on the school board's support stated that "morally and financially, they're certainly behind us." A school coordinator remarked that, "the school board has really supported it, and because of that support I think it's been fairly successful." The superintendent explained that,

> The board felt that in order for distance education to have a hope of operating properly and succeeding, it had to be supported with personnel. What the board has done is approve one additional staff member for each school to be the coordinator to oversee distance education, monitor the students, and supervise in the classroom. We have schools which have chosen to modify that arrangement in a way that they felt they could best use that person. In some cases the allocation of an additional person saw a translation into different people working in the distance education classroom; different staff members shared the task. But nevertheless the board felt that it was a good idea to fund through personnel.

Apart from the extra staff members the school board has provided extra finance for equipment and room modifications. Although the distance education rooms in each school were different, they could be described as exceptionally good facilities.

As well as providing personnel, equipment and a modified classroom in each school for distance education, this jurisdiction had invited Alberta Education to conduct an evaluation of its distance education administration and arrangements during the 1989-90 school year. The superintendent explained that,

> When we asked for a study be done, we were interested to find out how effective our organization was in terms of managing the distance education in our schools, and again I allude to this business of hiring additional staff. We wanted to know if we could do as well by not hiring an additional certified staff member in each school, and we simply wanted to compare ourselves to other jurisdictions who might be offering distance education programs. But, because of the different approach that was taken by so many jurisdictions, we weren't able to to get a feeling for what it was we really wanted looked at.

The evaluation appeared to be more concerned with the lack of explicitly stated distance education goals in each school and other tangible proof of order and effectiveness, and rarely went beyond the "concrete" stage of facts and figures. The evaluation did not provide what the school board and the superintendent wanted from the evaluation; "a feeling" of how the distance education arrangements were working in this jurisdiction compared to other jurisdictions offering distance education programs. However, the evaluation did make the general statement that, "the distance education program in the Three Hills School Division, though in its early stages of development, has made remarkable progress" (Alberta Education, 1990, p. vii).

With four schools this jurisdiction was probably large enough to form its own distance education cooperative and provide sufficient curriculum expansion for its students needs. The superintendent remarked that "because we find ourselves such a major user" the board had considered that option.

> As a matter of fact, we've just received an invoice from the consortium to the tune of seventy-seven thousand dollars for services that we are receiving from the consortium. One has to ask the question of whether or not it's more economically feasible to seek those resources from a consortium, or whether one might be well advised to hire additional staff for the equivalent number of dollars to provide similar services that are locally coordinated within the jurisdiction.
>
> But I guess we decided we would go along with the idea of a consortium because our experiences with the pilot project were very good, our associations with other jurisdictions were good, and there is a lot of support one gets from other people with hiring tutor-markers and assisting in the governance of this kind of operation. It just seemed to be prudent to maintain that kind of relationship. We will, however, be reviewing our membership at the end of the year, but that's

> simply a matter of procedure relative to our board's agreement to becoming members of the consortium.

First School

Trochu Valley School became part of the The Distance Learning in Small Schools Project in September 1989 at the beginning of the third year of the three-year pilot project in south central Alberta. According to its principal, the first school surveyed in this jurisdiction had 101 high school students, and in the first semester 36 of these students were registered to take about 120 credits of tutor-marked courses. The principal explained that the school's use of distance education was only half of what it had been during the initial year, 1989-90, when more than 70 students had taken a total of 450 course credits.

> Last year we had about 70 students, and we're now down to about 30. The first year we allowed pretty well anybody to take whatever they wanted in distance ed. If a grade 10 student didn't want to take computers in a regular classroom, he could take it as a distance education course, but we found that wasn't very practical. We found some students were just opting out of regular classes because they didn't like the teacher, or because they thought it was going to be too much work in the regular class and this was an easier way to go.
>
> After evaluating our distance education program last year, we felt that it would be better to keep live instruction where possible, because we feel live instruction is better than distance education.
>
> So we only allowed students to take courses if what we offered in the regular program wasn't suitable for them. Because they were not highly successful courses, we restricted the use of English and mathematics distance education courses to students who are out of synch., or for some reason or other they can't take those subjects in the classroom. With these changes its cut down our distance education numbers considerably.

The principal had arrived at the school at the same time distance education was beginning in 1989, and explained that although the previous school administration had declined the first opportunity to join the project, they had eventually taken advantage of the opportunity to expand the curriculum and acquire extra funding through provincial grants.

> Three years ago we were given the option, by the superintendent, as to whether or not we should go into it. The people in the the Three Hills School and Trochu School decided they didn't need it, because our schools were big enough to offer a relatively good program for the high school students.
>
> Two years ago the superintendent and the board decided that we should go into it anyway, because the program was there, the money was there, they gave us

> another staff member, gave us the lab., and said, "Here, you may as well try it," so we did.
>
> That was why it was given to us, but with the idea that it would expand our program. There were some courses that were not being offered in the school anymore, such as the small-enrolment courses: Law 20, Psychology 20, Economics, and Basic Business. In the past if you had only three kids wanting to take typing they couldn't take it, but now they can take it through distance education. So it's provided a broader high school program, and I would say that's the main reason why we now offer distance education courses.

The principal, who was also the school's distance education coordinator took on this role because of the reluctance of teachers to become involved with distance education. As well as taking on the role of coordinator, during the first year the principal was a "facilitator in the classroom for three periods a day," and shared the supervision of the distance education students with several other teachers. Although an extra staff member had been allotted to the school to allow for the supervision and coordination of distance education, this role was shared among a number of teachers. The principal described how these distance education arrangements evolved.

> When I arrived in this school all the teaching assignments had been allotted, and distance education was being given for the first time. Although they had allotted one staff member, those who had time left in their timetable, including myself, were put into the distance education room. So I took the role of coordinator, and I've kept that all the way.
>
> I'm not in the distance education room as a facilitator this year, but I still oversee it. I check the faxing, I check the student's lessons, I get their exams prepared, I give them to the teachers, and I coordinate what teachers are doing, because we have five teachers in there at different times, so someone has to oversee what's happening.

Although the principal was not pleased with the extra work, or with the way the distance education arrangements had evolved in his school, he saw no alternative to the existing arrangements because of his staff's reluctance to change.

> It's quite a hassle for me to keep track of it all. To have everyone doing the same thing all the time, and keep track of the lessons with different people in there every period, it's tough. I'd rather have one person doing it, and then I wouldn't have to, but you can't pick just one person and say, "Here, you're in there all the time," I haven't been able to do that yet. The first year, of course I didn't have any hope of doing that, and this year I could have except I didn't have anybody who wanted to do it.

> You can't take somebody who doesn't want to be there and plonk them in the distance education room and say, "Now you're there all day." I asked a couple of women teachers whether they would go in there part time, and they practically broke down in tears. They thought I was insulting them, that it was a demotion. You get some hysterical results sometimes when you're asking people to do things a little differently to what they did before.

Scheduled teacher supervision and scheduling of students into a dedicated distance education facility were basic elements of this school's distance education arrangements. The room used almost exclusively for distance education was a modified classroom with a small room at the back for the fax machine and teleconferencing facilities. The principal explained the distance education arrangements as follows:

> The way it's organized is that we have the teachers slotted into the room, so we have a body there every period. Then the students timetable themselves into their regular classes, and if they have an opening where they cannot fit something in, then they are offered a distance education class, and it can be any time of the day.
>
> It just happens that in some periods there are more students who need a distance education program than at other times. In period one, for example, there are only three students in the room, but in period two there might be fifteen students, so it depends on the students' needs, and that's how its organized.
>
> I do the coordinating and we have five or six teacher-facilitators who also do the faxing; there's no clerical help; and then again I look after the report card marks. When the marks come back I get them gathered up, and I look after sorting them out so the teachers don't have to worry about doing it for the kids in their classes.

As the principal remarked, "there's no clerical assistance," so the tasks of faxing, recording of marks, and distributing lessons were shared between the principal and the supervising teachers.

> We collect the student's work to be faxed during the day, but send it after school because what we found was that if you tried faxing while the students are working they stop work. So we save until after school, and then we take turns. My day is Friday, somebody else is Monday and so on, and we fax them all at the end of the day and send them out after midnight, which is the cheapest time. I usually collect them and sort them out in the morning, and whoever is in the distance education room during the day records the marks and gets the lessons back to the students.

Issues

The principal commented that while he would prefer one person supervising, and possibly coordinating the distance education students, in this school teachers were extremely reluctant to even supervise in the distance education room for a small amount of time.

> Some hate it; some find it very boring, because basically you're a facilitator, you're a tutor, not a teacher in a traditional role. . . . Just keeping the students on task is enough of a problem sometimes, because some of the students who are there are not the highly motivated ones, so to keep them working, to keep them on task, to get the exams out at the right time, to get their lessons in, and record them is not easy. And, I don't have too many people who want to be in the distance education room full time.

The principal found that sharing the work with a different group of teachers each year was "a bit of a problem because you have to train the teachers. On the other hand it does give them a taste for distance education and gets them familiar with the program."

According to the jurisdiction's policy "students who do not complete programs which they have registered in will be required to pay the course material cost." While this was a minor issue, it was a requirement which the school found difficult to enforce. The principal commented that, "if a student drops out they ask us to try and collect the material cost, which is about $50, from the student; sometimes we succeed, sometimes we don't. If a kid moves away it's pretty tough to grab $50 off him before he leaves." Apparently this had not been a serious problem with a completion rate of 95% of distance education courses in the first year of operation.

When asked if there was one major problem or issue with distance education in his school the principal replied,

> Last year it would have been getting materials, but this year our materials were handled a lot better; the kids were into their work quite quickly this year.
>
> Keeping kids on task, keeping the lessons coming in on time, that's still our biggest problem. they tend to want to visit rather than work, so I've had to make some very clear guidelines: They can't sit together here as groups; they have to spread themselves out.
>
> The teachers have to keep them working just like in regular classroom and not let them visit. There's always a tendency for them to sit down and say, "I've got a few more days; I don't need to do it yet." It depends a lot on which teacher is in there: Some teachers have got them working very quietly, and for others it's a struggle all the time.

Second School

Three Hills School became part of the Distance Learning in Small Schools Project in September 1989 at the beginning of the third year of the three-year pilot project in south central Alberta. Although Three Hills School was also only two months into its second year of distance education at the time of this survey, it had already established a very large and what appeared to be an effective distance education program. During the 1989-90 school year about 70 of the 96 high school students took a total of 767 distance education course credits and recorded an 87% completion rate. In the second year this number had been reduced considerably, and 60 students were registered in approximately 500 tutor-marked course credits.

The reduction in the number of course credits was not caused by any restriction placed on the use of distance education by the school administration. According to the principal, "normally, we haven't restricted them; if they would prefer a distance education course, then they're allowed to take it. . . . They have the distance education menu, and they can take what they want." There appeared to be two reasons for the reduction in the use of distance education in the second year. During the first year distance education had apparently satisfied a "backlog" of students' needs for courses. The principal explained that, "In the past where students had a particular need for a course and couldn't find it or fit it into the timetable, they've had to come back for another semester or year, whereas distance education has eliminated that problem." The school's distance education coordinator supported this view and stated that because of distance education,

> We'll see a lot of students get out of here in three years instead of lingering on for four years, because they are now able to get their credits. For some of the students who come in late or come from another school and are out of step, it has given them the opportunity to get back into step.

A reorganization of classes was the second reason for the reduction in distance education credits in the second year. A change in the organization of lower level English and mathematics classes had caused some of the less-able students to take more distance education credits in the first year and less during the second year. The reasons for this fluctuation was explained by the principal as follows:

> In the past we had a number of classes with split courses, and last year we moved some of the courses over to distance education and made straight streaming in the regular classroom. This year we've gone back to some split classes again in Mathematics and English, feeling that perhaps it's preferable. So now we're able to take Mathematics 13 and 23 and combine them and have sufficient numbers to run a class, and we've done that as opposed to leaving both Mathematics 13 and Mathematics 23 on distance education.

Irrespective of the changes which caused a reduction in distance education use, according to the principal this school still had a relatively large program with more than half the senior students taking one or more tutor-marked courses:

> Part of it is because we mandate no spares for grades 10 and grade 11 students. If they can't fit into the regular timetable for a course, then they pick up a distance ed. course. We did this because students were just playing about and coming into grade 12 without enough credits.
>
> Two years ago we had a student supposedly taking part in the graduation with only 56 credits to her name. Last year when we instituted this policy, there was no student in the graduating class that wasn't qualified for the Alberta High School Diploma if they passed the courses they were taking. Similarly this year, there will be no one without sufficient credits.

The principal was confident that the existing distance education arrangements in his school would continue and could not foresee any "compelling reason to change." The principal explained his involvement, and how distance education had been organized in his school, as follows:

> As principal of the school I oversee the distance education program, as with all other programs. Although I've been a little more involved with distance ed. because it was a new program last year and it took a fair amount of organization to get it working.
>
> I oversee student's programs, and work with them when they're selecting their courses; and timetabling them into the distance ed. room. I try to timetable students who are working on similar courses at the same time.
>
> We have a coordinator who is permanently assigned to the distance education room and oversees the students' programs on a daily basis. He's assisted by a work-experience student in the distance education room which is set up with a fax machine, teleconferencing facility and a computer for electronic mail.

Each semester a different student was given the opportunity to do work experience in the distance education room and gain credits toward their high school diploma. The work experience student was assigned to the distance education room for two periods each day faxing and distributing lesson materials to and from tutor-markers. There was no suggestion of any problems with confidentiality, and the coordinator commented that, with 100 to 200 pages to be sent each day, "having someone fax everything out for me saves me a lot of time." According to the coordinator this situation allowed him to spend more time helping the students.

> My role is to facilitate the studying, not so much the assignment, because the principal figures out who's doing what. Once that's done I take over from there. I distribute the materials, make sure the students sit here and do their work. To the best of my ability I help them out when they have problems with something, and it's usually mathematics or science; the other things aren't as much of problem, because it's just a matter of reading the material.

The distance education room was very impressive, and compared to others viewed throughout this survey, it was probably one of the best facilities of its kind. According to the principal the distance education room was a good example of the school board's support for this program. The principal commented that, "they put in all the equipment, they renovated the room, and they didn't skimp on equipment either: They put in good equipment." A large art room had been converted into the distance education room with student carrels around the outside, large tables in the centre, a large blackboard along one the side wall, and a teleconferencing and a telecommunications room at one end of the room.

Issues

During the interview the coordinator indicated that there were two related problems which appeared to worry him; student discipline and his ambivalent feelings about being confined to the distance education room all day. The coordinator commented that,

> This is a nice setup and I think it should work better than it does, but I feel that the kids are just too talkative. . . . We put in these carrels so these kids would be apart and not be able to talk to each other, but it only works up to a point.

> I'm in here all the time. I don't get any spares during the day, so I'm in here from the morning till we quit. I never see daylight. There are no windows here either.
>
> I used to be a full-time teacher of mathematics, physics, and chemistry and that's changed and now I'm in here all day. I kind of like it, but there's one aspect I don't like, and that's the discipline. I'm always after them, "Shut up! Get to work! Sit down! Quit wandering around!" that type of thing. That is really the frustrating end of it. Otherwise it's fine, and I like it especially because I do nothing but this all day, I don't have any homework at night, and I don't have to prepare any lessons. For the first time in twenty years or so my evenings are mine!

When the principal was asked, "Are there any problems with the way distance education is organized in this school?" he emphatically replied, "No!" but later added,

> It's pretty well in its infancy. This is the first year for the consortium, and it's only our second year into the project, and we've changed a few things since we started. As we go along, we learn, and there's a distinct possibility that we'll make more changes in the future.

The principal also indicated that teachers were concerned about losing students, and possibly classes, to distance education. The principal commented that,

> There have been a couple of cases where teachers have said, "Enrolment in my course is dropping while students are picking up distance ed.," to which we're saying, "Why isn't your class more attractive to students? Get out and sell your class if you want students in it; let them know why it's worthwhile for them to be there."

Third School

Carbon School began distance education in September 1987 as one of the thirteen pilot schools initially involved with the Distance Learning in Small Schools project in south central Alberta. By the third and final year of the pilot project in 1989-90, distance education was an established and integral part of the high school program. During the third year, all 42 senior students enrolled at the school took one or more tutor-marked courses, registered in a total of 420 course credits, and achieved a 97% completion rate. These results are quite impressive when compared to the lower 94% completion rate for courses traditionally taught in the school. The results are even more remarkable considering the unfavorable school conditions that existed during the 1989-90 school year. The principal commented that, "this is the first year in our new facility; we were under total modernization last year. We had no room, we just had a fax machine [and classes] over at the curling rink." An insufficient supply of course material added to the school's problems, and according to the principal, "we had the poorest supply of material that we have ever had in all the years we've been dealing with the LRDC." Consequently, a considerable amount of distance learning time was wasted during the first semester of that year.

This survey coincided with the beginning of the fourth year of distance education in this school. The school's rebuilding program had been completed and most of the problems with the supply of distance education course material had been overcome. The school's 40 senior students were once again registered in about 420 credits, and according to the principal, except for one course, "all the kids have their course material and they're rolling."

The principal's attitude and support had obviously influenced the success and acceptance of distance education in this school. He had been involved in his school's distance education program since the beginning of the pilot project because he believed it was the only viable alternative for senior students in this small community. The principal commented that,

> When the pilot project came in and we decided to run with it, I stuck myself out on a limb on the proposed success rate. Now we're realizing that success, I think the community is starting to feel more comfortable with it too.
>
> It's increased the quality of education for the students in my school, given a much better variety of courses and provided more options. It's provided chances for students who otherwise would have fallen in their tracks, because a course is only offered once, and then all of a sudden it's no longer available. We had to use correspondence in the past, but the success rate with correspondence was very low, but I think this is far better than correspondence.

The principal explained that, although "some parents are pro and some are con they felt that it was a way of keeping our school as a viable unit, and I guess I've always kept that before them, 'what are our alternatives?' The principal answered his own question.

> Our alternatives are such things as running large classes, making the students take courses they don't want, and that's what we used to do before [distance education].

> They didn't have a choice; that was it. Languages were basically non-existent in this school. Physics and many other courses were not available unless you did it by correspondence, and the completion rate was very, very poor.

Although the principal was the designated distance education coordinator, this role appeared to be shared with the supervising distance education teacher. The principal had the responsibility for student counselling, registration, and some distance education supervision. The distance education teacher was employed about three quarter time to supervise the students and fax, distribute, and record the tutor-marked lessons.

The principal attributed much of the recent success with distance education in the school to the efforts of the supervising teacher. Although she began her teaching career as a "primary teacher," and had several years away from teaching raising her own children, she returned to teaching as a substitute teacher in the high school and was eventually employed permanently as the three quarter time distance education teacher. The principal expressed his appreciation for the supervisor's work, and at the same time justified the clerical arrangements, in the following comments.

> We have much better than a clerical aide; we've got a teacher with qualifications to help, and she's done an excellent job. She takes pride in getting the lessons faxed out on the same day, and she will hound the tutor-markers, not in a negative way, but just asking, "when are the lessons coming back?" She will be in contact with the tutor-markers if they don't get them back on time, and I think that's important because the kids come to us and ask the same questions. So she definitely has become a liaison. She also encourages the students with their work and encourages the students to contact their tutor-markers.

At the start of her second year, the distance education teacher commented that,

> Compared to last year, the attitude of the students this year is just fantastic. Last night I went through our statistics, and in September we had sent out 132 lessons and our average mark is 81.7%; that's how well they've done.
>
> I don't know whether the kids have picked up from me, but I really like it. This is the fourth year and I think the teachers who were assigned to it before were also teaching other things, and it was too much, because there's a lot of paperwork.

The scheduling arrangements were similar to the previous schools in this jurisdiction. Students were scheduled into a well equipped distance education room with a teleconferencing facility at the back of the room. If possible the students were scheduled together according to their subjects, so that at one time a distance education class might consist of all mathematics students who may be doing different course levels.

It was observed that the supervising teacher took every opportunity to develop a nurturing teaching role with the students, particularly during the exchange of lesson materials. For example when completed lessons were handed to the teacher, the lessons were checked and discussed with the students and then faxed to the tutor-marker. When the lessons were returned the teacher made a point of reviewing the tutor-marker's marks and comments with each student. At that time she either scolded them gently or gave them the encouragement they needed in the manner of a regular classroom teacher.

The distance education teacher was well aware that working as a team with the student and tutor-marker, and using competition between students, where appropriate, produced good results with the students. The teacher commented that distance education was so much better than the correspondence mode, where students worked on their own, because

> They've got me for support and they've got the tutor-marker for support, and, when you get a good group of kids together the competition is keen. We've got a group of Mathematics 23 and the same group is more or less taking Physics 10, and it's competition, competition. When they get their lessons back, and especially the exams, they're looking to see if the tutor-marker has added up the marks correctly. It's good the way they compete with each other rather than being alone trying to do it.

Issues

Although minor changes with the distance education arrangements were anticipated by the principal, he expressed the view that although the current arrangements were working extremely well, communication was always a major issue, and supply of course materials was still a minor problem. The principal also commented that,

> I don't know whether it's good or bad, but even last night with the parent-teacher interviews we had no requests with regards to distance education. Now, whether we're getting them informed or whether they're saying, "We've had enough," I'm not sure, but I don't think it's that. I feel that we've started to corner a lot of the problems that initially were involved with the distance education program.

> One of the things that came out of the our school evaluation that we did last year was the idea that there's never enough communication with staff, students, or parents. I think it's important to let them know what's happening. . . . You never have enough of that. I think that way there are no surprises; they know what we're doing and what we're wanting to do, and that's the key.
>
> I'm still not 100% happy with the supply of course material and I think that they've taken steps to try and improve that, but unless a course is totally ready to be offered, I don't even want it on the list as being available unless it's complete at the beginning of the school year. I think that's imperative. It's not fair to the kids, the school, the tutor-markers, or to anybody in the system, and I would rather wait another year for new material than get caught up in that sort of bind again.
>
> There are some courses that were not available and we got a copy and copied those copies. We've got six students doing Physics 10 right now and we don't have the material. It was back-ordered , and they're supposed to be ready now. I was just on the phone to them [LRDC], and now I'm supposed to submit another order. It will take another two weeks before it gets up there and back.

The supervising teacher also expressed the view that the distance education arrangements were working extremely well in the school, and the only problem she could identify concerned the "self-discipline of some students." She commented that, "the good students have done well, but the students who won't work in the classroom have a little trouble working independently on their lessons in distance education."

Fourth School

Acme school became part of the The Distance Learning in Small Schools Project in September 1988 at the beginning of the second year of the three-year pilot project in south central Alberta. In an evaluation conducted during the 1988-89 school year, it was stated that distance education was adopted by the Acme School to provide classes for general diploma courses which had low enrolments such as Mathematics 14, 13, 24, 23 and 33, English 13, 23, and 33, and elective courses. Providing these courses had become more difficult because of a declining high school population, and because a majority of students had preferred to take the higher level diploma courses. According to the evaluation, the Acme school's administrators saw distance education as

> An opportunity to provide a wider range of course offerings to all students enrolled in Acme school without an increase in school-based staffing. It was seen as a way

> of continuing to operate a viable high school despite a decline in student population and a resultant reduction in available teaching time.
>
> It was expected that by using DLSSP [Distance Learning in Small Schools Project] for low-enrolment courses, teachers would be made available for re-assignment to other areas of the school program with more pressing needs for teacher time [for example] elementary grades.

During the 1989-90 school year, and the second year of distance education in this school, 60 senior students took a total of 469 tutor-marked course credits. According to the school's own "evaluation update," students achieved a remarkable completion rate of 98%, and the average mark of 63% for the tutor-marked courses was six points higher than the 57% average for courses taught by traditional instruction. The assistant principal commented that this commendable effort was achieved "by being nasty." He added that,

> The day lessons are due, if the students haven't completed their lessons and handed them in on that day, they spend the next noon hour with us and noon hours after that until their lessons are complete. They don't like to lose their noon hours, so they make sure they keep on track and keep on time.

At the time of this survey Acme school was two months into its third year of distance education with three quarters of its high school students taking one or more tutor-marked courses. This meant that about 54 of the school's 73 senior students were taking a total of 450 distance education credits.

Although distance education was initially adopted by the Acme school because of difficulties in providing classes for general diploma courses such as mathematics 14-24-13-23-33 and English 13-23-33, the assistant principal suggested that there had been a change in practice, if not in policy. He stated that,

> We try to teach everything we can that's required for the high school diploma, such as Science 14 and 24, Mathematics 14, 24, 13, English 13, 23, as well as the 10-20-30 courses.
>
> The students who are involved with distance learning are generally those doing option courses, like accounting, law, mechanics, or students who don't fit into the timetable where the courses are being offered. Often they're students who have fallen behind in a course because they've been unsuccessful.
>
> If a course is being taught live, the students are expected to take it that way rather than through distance learning, because we feel that live instruction is a better method for teaching children.

The assistant principal, who was also the coordinator, indicated that the distance education arrangements were well established and commented that, "I don't see any major changes in the future, because it seems to be fairly successful."

Although the jurisdiction had provided a full-time teacher equivalent as extra staffing to look after distance education, four teachers shared the responsibility as part of their teaching assignments. The assistant principal/coordinator explained the distance education arrangements as follows:

> My role is to oversee the program in the school. I'm also involved in supervision in the distance education classroom approximately half-time. . . . The principal is a quarter time in the distance education room, and two other teachers share an eighth each, so that there are four of us involved at different times.
>
> We have our school days divided into four blocks, and students can select a distance learning course, as one of their options to fill up the blocks in their timetable for the year. They are supervised by a teacher at all times so they can ask questions, and they have free access to the phone to contact their tutor-markers.

According to the assistant principal/coordinator some of the clerical work, such as "filing, duplicating, and bulletin board work" was done by a work experience student, but "the faxing is still done by the supervisors; whoever is in that room." However, the coordinator commented that with so many people involved, the clerical system was a problem, and "I end up doing a lot of the clerical work as well as the administrative work in there because it needs to be done."

Besides the regular support for the distance education students, the coordinator had also organized a system of teacher advisors. The coordinator commented that, "Students don't get the best education through distance education without a lot of input by local staff." Consequently the coordinator had organized a list of "expert" teachers, who were available at certain times and willing to help the distance education students in the school. The coordinator explained that,

> We have a list of teachers and courses. We call them our local experts, our local staff expert on each of the courses, and the students are made aware of the teachers' names, what courses they can help with, and when they're available. The staff are all very supportive and help in whatever way they can.

Issues

The coordinator expressed an ambivalent attitude to distance education, and while he provided proof of the success of distance education in this school, he identified two issues which could have a serious effect on the school's distance learning program in the future. The coordinator expressed the view that because distance learning was mainly based on reading and writing it was still inferior to "live" instruction, and would not reach its full potential until more interactive technology was used in conjunction with the distance learning courses.

> I find that students probably aren't getting the same kind of learning that they would in a live classroom, because everything is reading and writing if they're using the distance learning material as it's supposed to be used. If these distance learning courses are developed in the direction that they seem to heading, and we start to use more technologies and more interactive technology,. . . as well as the reading and writing, then distance learning has a great deal of potential.

The second issue concerned the loss of traditional classes in the senior school because students were taking other courses through distance education:

> We've found that some of the programs that we ran here for a number of years are being dropped by the wayside, because now the students have all those other choices, and we don't have enough bodies to fill up the classes.
>
> An example would be the art program that our principal has run here for a number of years. It was a combined Art 10-20-30 class, but we didn't have enough kids interested in it this year to run it. Most of the kids opted for a selection of subjects out of the distance learning room.
>
> The principal is disappointed to see his fine arts program dwindling down. Although some of those students do take an art course through distance learning. We're having some difficulty with our French program for the same reasons. . . . Accounting we used to try to work in for students on an optional basis, and we haven't been able to do that any more, though it's one of the more popular distance learning courses right now.

It is interesting to note that earlier in the interview the assistant principal/coordinator commented that, "our accounting tutor-marker does a super job with the kids and gives them extra questions to work with, and when they have problems they phone her all the time, so there is a lot of interaction goes on there."

Rocky View School Division

The Rocky View School Division's distance education program was interesting and unique because it was new, and based on expert advice and experience gained from the provincial pilot projects. The high school component of two of the jurisdiction's rural schools started distance education at the beginning of the 1990-91 school year, only two months before this survey. The distance education model implemented in the two schools was based on 26 recommendations from a feasibility study prepared by Clark in June, 1990. Clark's feasibility study was supported by references, and experience he had gained, from the evaluation of the two provincially sponsored pilot projects; the Distance Learning in Small Schools Project, and the Distance Learning Project North.

Clark's (1990) feasibility study also has relevance for other jurisdictions involved in, or contemplating the introduction of distance education in their schools. The study provided a brief but comprehensive background and conceptualization of distance education in Alberta, and also provided a discussion and recommendations for operating and implementing a distance education program. According to Clark, there are eight areas which must be considered: "Teachers, support staff, administration, physical plant, equipment, library/media resources, public relations, and finances." Among the 26 recommendations in the report there are three basic elements which stand out; (a) The need for inservice and orientation of teachers, school assistants, students and parents; (b) The employment of a school assistant to do the clerical duties associated with the tutor-marked courses; and (c) The recommendation to start slow. With respect to the latter recommendation Clark wrote: "The number of credits offered through distance education should not exceed the 100 credits proposed until the management system to support distance education is well established."

To the credit of the Rocky View jurisdiction, Clark's (1990) 26 recommendations appeared to have been implemented faithfully in both schools on a pilot project basis.

However, the jurisdiction had included one additional aspect. According to Rocky View's curriculum director students were expected to pay a deposit of $10 per credit or $50 for a five-credit course, and "if they successfully complete the course, the $50 is refunded." Such a minor change was not expected to have any significant effect, and according to respondents the implementation of the distance education program had been extremely successful and well received by staff and students during its early stages.

First School

The first school surveyed in this jurisdiction had an enrolment of 100 high school students. Eight of these students were taking a total of about 30 course credits in the first semester of the jurisdiction's pilot project.

The assistant principal, who was also the distance education coordinator, commented that while there had been "no positive or negative feedback from the teachers, they have agreed to be advisors and spend some time with the distance education students. I've had positive feedback from the students saying that they're getting the help they need, so that is good."

The coordinator claimed that distance education had provided students with the opportunity and the flexibility to complete their high school diploma requirements and graduate.

> Our objective is to encourage students and provide the opportunities with distance education where students can achieve and succeed as opposed to either not taking the course or taking it by correspondence, where the completion rate is somewhere between 30% and 35%.
>
> We have students who have certain course requirements that can't be timetabled in our program. Being a small school with only 100 students, distance education provides flexibility for our high school program. . . and allows students to meet their graduation requirements, even if it means taking an extra course.

The coordinator emphasized that without distance education the only option for many students was to take courses by correspondence or to stay at school for another semester. While the main thrust of the distance education pilot project was aimed at eight grade 12 students, other students still had access to extra courses through correspondence:

> The grade 12 students come first because they've got immediate needs to meet certain course requirements. . . . The group we have are largely self-motivated. I would say six out of the eight are really quite good; two are just starting to get into the routine, but let's face it, for them it's a change; it's a change in learning mode that they are just getting into.
>
> For one student, it's a better mode of learning. . . . That student has shown that she is self-motivated where distance education is concerned, but did not show the same motivation for other courses in a traditional classroom. She's happy about distance education, and she's doing very well. I asked her did she like the distance education course. She said, "I love it."

Although the students were scheduled into the dedicated distance education room, the students were only partially supervised, and according to the coordinator "there is a fair amount of responsibility put on the students."

> It's put a drain on supervision. We don't have enough people to supervise the distance education room. If you look at the pilot project which started three or four years ago, one of the key recommendations was that these students need to be supervised just like traditional instruction to be sure that they maintain their schedules. . . . We do some, but we can't give it full-time supervision.

The coordinator explained that the distance education students are timetabled into three of the five blocks per day. "Block three is supervised for the full period; the rest are casual. I may walk by and we have a teacher's aide there at a given time, but there's not always somebody there." The coordinator added that,

> Because we don't have enough people to supervise I will go by the distance education room during my administration time to see whether the students are working and take attendance if I so choose. It's flexible, and quite often I'll help the students, because the courses they're taking sometimes need interpretation in terms of questions. Mathematics is my strength, so when I have time I'll help the students who are doing mathematics.

The coordinator explained that although "students are encouraged to contact their tutor-markers, regularly, by phone," teachers within the school are also available to provide tutorial assistance to the distance education students.

> Let's face it. If you have someone locally who is willing to help you with your mathematics, and it's a friendly face that you are familiar with and you see every day, that's who you go to.

> We team up each student with a staff member or an advisor, people who might have a strength in a particular subject area, so that a student does not always have to seek the tutor-marker's help from a distant school. Just like I said I do with mathematics, one of the teachers is assigned to help with the law students, another one helps with CALM and personal living skills, and that's worked out very well. It's only voluntary, so this is done above and beyond their normal duties.

Although extra teaching staff had not been provided to assist with distance education, the coordinator commented that,

> One of our teacher aides helps for one hour a day, so I guess in that way we did get extra help. The teacher aide is designated one hour a day to help with the faxing, do the extra paperwork, record-keeping, and stuff like that, and that's been very helpful.

Issues

Apart from the lack of available teaching staff, a problem which the coordinator alluded to several times during the interview, the coordinator addressed only one issue; the delay with the supply of course material. This was a problem common to schools which had just become involved with distance education and the LRDC. The coordinator commented that,

> This year the simplest problem, the worst problem, was getting the course material on time. We just got our mathematics material yesterday; November 5. . . . We only had two courses start on time, with the actual material. The other material we've pilfered , we've borrowed, we've begged, we've copied, and we finally got the rest of it yesterday two months after it was ordered on the first day in September.

Second School

The second school had an enrolment of 125 high school students. Ten of these students were taking a total of 53 course credits in the first semester of the jurisdiction's pilot project. According to the school coordinator, the distance education program had been extremely successful during the early stages, and favorably received by staff and students.

> I think most teachers understand that we're trying to offer the students the widest variety and best quality of instruction we can, given the considerations of a rural school, and so far I haven't heard a negative comment.

> They're very positive about it in this school, and I don't know if this is an unusual situation, but the staff is concerned about the quality of education that the students receive, and not just the quality of the courses they get to teach.

The coordinator explained that previously students who needed extra courses took them by correspondence but, "we had a completion rate of something like 20% in correspondence, not a pass rate, a completion rate." After only two months of tutor-marker distance education the coordinator proudly claimed a completion rate of "100% so far" and according to "the last reporting period, which was last week, the pass rate is 100%." The coordinator added that,

> This is only our first semester,. . . and 10 students is not a huge sample, but we do have a couple of weak students as well, and they're all doing quite well. . . . Right now everybody in the program is passing, everyone is on time, and nobody has dropped out.

While this jurisdiction had intentions of financing a total of only 100 course credits for both schools in the first year, because of the demand it was likely students would be allowed to register for nearly 200 credits during the first year of distance education. The 10 distance education students in this school were registered in a total of 53 credits in the first semester in Physics 10, 20, 30, Biology 20, and Mathematics 10, 23. The coordinator explained that the number of distance education credits had increased partly because three "academic" grade 12 students, interested in science based tertiary study and careers, "were given permission to do the entire stream of physics in one year."

> So they'll finish Physics 10 in a week from now, then they'll do Physics 20, finish that by January 15, and then do physics 30 in the second semester, and they're all averaging above 85%.
>
> These students are probably in the top five of the grade 12 class academically, but they couldn't get physics previously. . . . Physics has been offered only once in the five years I've been at this school because of the lack of staff to teach it.

In the second semester about the same number of credits and type of courses were to be offered, and at least two of the less able students were to be given the opportunity to take Mechanics 12, and Social Studies 33. The coordinator commented that,

> The student who is going to take Social 33 is an interesting case. He's been offered an apprenticeship at a Ford dealership, which would be fine except that he's going to be five social studies credits short for his diploma, so he's going to be taking social 33 through the distance education program, but he won't be in the classroom. He'll be doing this out of school and then just dropping off the materials for us to fax away, and he'll be making his own arrangements for teleconferencing and so on.

The usual distance education arrangements were similar to those in the previous school except that a teacher had taken on the role as the coordinator, and the clerical assistant was more involved with the students and worked in the distance education room for most of the day. The dedicated distance education room was small for a normal classroom, but had been specially adapted for distance education and was ideal for about 10 students at a time. As well as housing the teacher's aide, this comfortably furnished room contained the computer, fax, and teleconferencing equipment. According to the coordinator this room had influenced the success of the program. "As you can see this is a very pleasant room. . . . I think the impact has been very positive; the students enjoy working in this environment."

The coordinator also explained the other distance education arrangements as follows:

> I supervise the students, but it's primarily an administrative kind of role. We have a teacher's aide who actually sits in this room with the students and keeps their charts and does all the clerical things. She makes sure that the students are on task and arranges for extra help when they need it, and when a tutor-marker is not available arranges some kind of assistance from another teacher in the school who has the appropriate expertise.
>
> The teacher's aide is officially employed three-quarter time in the school, and of that time she's supposed to be half of that time in distance education and half-time in special education. However, I would think that she probably spends somewhere in the neighborhood of 90% of her time with distance education.

The 10 distance education students were scheduled into the distance education room during the three morning "blocks," and the teacher's aide was also in the room "whenever there's a distance education student in here." The coordinator remarked that,

> If someone were to ask, "what factor has contributed most to the success of distance education here," I would have to say that it's the particular individual we have as a teacher's aide. She's incredibly organized.

> This woman also works through the Physics 10 material with the students. She's learning the course herself just so that next time she can help the kids. So I have to say that she is the biggest factor in our success.

To a question about the future of distance education in this school, the coordinator was asked, "Do you think it will continue and possibly expand?" He replied,

> Oh, absolutely. From what I understand our mandate next year is to offer distance education to the extent that we need to offer it. We have to turn students away at this point, especially for the second semester. There are a number of students who, because they're out of stream, have to have certain courses in order to graduate. So they're the first priority this year. But as far as the demand goes, next year we could offer it to twenty or thirty students per semester.

Issues

This jurisdiction had taken time and care to implement distance education into two of its schools, but the program still had "teething" problems. Other schools involved with distance education for several years have become accustomed to ordering their requirements in June of the previous school year. Because the decision to proceed with the distance education project was finalized during the 1990 summer holidays, school personnel in this jurisdiction were unable to order the course material from LRDC until the beginning of September, the first day of the 1990-91 school year. Consequently this school was without most of its distance education course material for the first two months of the school year. The coordinator was extremely upset by this situation and stated,

> I don't think there is a problem with distance education; it's a problem with LRDC, the Learning Resources Distribution Center. I suggested to [the consortium coordinator] that we should forget about the LRDC as far as these materials are concerned, and get them directly from the Correspondence School and print them ourselves. I could have them printed in Calgary cheaper than we can buy them from the LRDC, and at least I could be assured that there's someone who is concerned about getting the stuff to the students on time.

County of Wheatland

The County of Wheatland has had considerable experience with distance education during the past four years. Two of its schools were original members of the Distance Learning in Small Schools Project, which began in 1987. Currently, the County of

Wheatland is the Agent Board for the newly formed Big Sky Consortium, and has four schools involved with distance education. The Deputy superintendent of this jurisdiction supervised the Agent Board's operation and the consortium coordinator's work, and chaired the consortium's Management and Executive Committees.

This jurisdiction had been part of the initial pilot studies which began in September 1987, and although all four schools were small enough to qualify, this jurisdiction was currently eligible for only a third of the provincial distance education grant because the local "tax base" was too high. Consequently the jurisdiction was subsidizing a program which, according to the local deputy superintendent would continue with or without the grant because distance education was essential for the survival of their small schools.

> If they took away the distance education grant? I think we're stuck in the program, because it's a survival mechanism for our small schools now, so we are committed to it, and there are jurisdictions that don't get the grant at all that are committed to it. I think we are in the same boat.

Only one of the four distance education schools in the County of Wheatland was surveyed during the first week of October 1990; two months into the fourth year of distance education for this school and its jurisdiction. The school selected for this survey had a high school enrolment of 29 students, with 18 of these students taking a total of 65 distance education course credits.

The principal, who was also the coordinator, explained that during the past three years distance education had gradually become an integral part of this school. "It was something that came to us as a pilot project about four years ago. It looked like it had possibilities, and we could see certain advantages for a student who had to repeat a course." With such a small number of senior students in this school, most of the diploma courses were "cycled" over a two year period. This meant that if students failed any courses they may not be able to graduate. The principal commented that apart from overcoming this problem, distance education had other advantages for the staff and students in throughout the school.

> Distance education has allowed us to phase out cycling, as well as provide students with a course to repeat. But another interesting thing happened. Because we were able to provide a variety of courses, students demanded more variety. No longer were we able to teach a course like Typing 10 to all grade 10 students. Three of them would say, "I want Typing 10," two would say they, "I want Law 20," and two more might want drafting. Before long we had proliferated into quite a series of distance education courses.
>
> It's certainly helped in terms of the overall organization of the school. Our teaching loads have been very, very heavy in the past, but now some staff have been freed up because students are taking complementary courses by distance education. In other words we no longer have to teach courses like Typing 10 because it's done by distance education. That means that a teacher who used to teach Typing 10 is now available to teach a junior high class. As a result we've been able to work away from split classes.
>
> For example, this year I am teaching grade 7 mathematics to grade 7, grade 8 mathematics to grade 8, and grade 9 mathematics to grade 9, and I have not been able to do that previously. I can tell you, it is no picnic to teach grade 8 and grade 9 mathematics in the same room at the same time.
>
> It's allowed me, with the same staff to provide for better staffing, particularly when I was principal and having to teach such a huge range of courses. I still teach them, but it gives me a chance to focus in on my role as principal, which before it was a matter of flying by the seat of my pants and hoping that everything got done. And in fact your adrenalin had to flow to keep that constant pressure going, and I don't think that's the best for human relations. So distance education has allowed for a lightening of the principal's teaching load as well.

The principal commented that, at the high school level, "we ended up teaching our core courses as teacher-taught courses and our complementary courses as distance education courses." However, the principal qualified this statement about teaching core subjects, and stated that "if a student is less academic, then they can pick up the 13-23-33 courses by distance education."

> That's something that's changed, because we used to teach 10 and 13 level courses in the same room at the same time., but with distance education it has given us some flexibility. The reason we changed wasn't so much because we couldn't have continued it, but if we had only one student who was weak in a subject it's pretty hard to teach a course to one student, so distance education provided for that.

The local deputy superintendent suggested that student success depends on the model of distance education a school implements and "how much help is given at the school level." The deputy superintendent expressed the view that this particular school's distance education arrangements were a good example of a model where students could receive the appropriate supervision and support.

> Each of the students is assigned to a classroom, so even though the teacher may be teaching Chemistry 10, or Mathematics 10, they can get around while they are working with other students and help the distance education students who are at the back of the room or at the side of the room or wherever they are. And that works well from what I've seen, because there is time in those small classes in the small schools to do that.

According to the principal the distance education model in his school was different from those in other schools.

> Ours is different from any other school I've seen. As the coordinator I'm basically like a department head, and all the high school teachers supervise a group of students. . . . Because of our lower pupil-teacher ratio, the teachers here understand that not only might they be teaching a course, but they might have some supervision in other [distance education] subjects at the same time.
>
> So the organization would be myself as the coordinator and main contact person, the teacher-assistant who does all the faxing, ordering of materials, making sure those materials are in place and given to the teacher-supervisors, who in turn pass on the marked lessons and other material to the students.

The principal made a point of saying that the teacher-assistant had made a tremendous difference to the efficient and effective operation of distance education in this school. He commented that,

> I'm fortunate to have such a good teacher-assistant, and before distance education we didn't have an assistant working at the high school level. Now, with a half-time teacher-assistant to do the clerical-type chores, this has really made it so easy to keep track of what is going on.

The principal continued to comment on the teacher-supervisor's role as follows:

> The supervising teacher sets the contract with the student in terms of schedules. Schedules are then monitored very, very carefully by the teacher-supervisors, because we have a real allergy to students falling behind. New assignments have to be worked out when students fall behind in their courses.

The principal explained that while it was not always possible to match up a teacher-supervisor's expertise with a student doing a particular subject, "we try."

> We book the distance education into the timetable after the master timetable has been completed, and that's when we try to match up the teacher and the student and generally we've been pretty good at it. . . . A course like Physics 30 I try to match a teacher with a strong mathematics background and/or science background. The same would occur with mathematics and English. So there are certain areas,

> particularly some of the tougher courses, where I try to pair a teacher with a student who needs assistance. But it depends on the courses the students are taking, the availability of the teachers, and in a small school a lot of other things that aren't always there.

The principal expressed the view that although "a teacher-taught course is better than a distance education course under the ideal situation, but how do you teach to two students?" The principal also acknowledged that, in a small school, often the quality of traditional instruction suffered because of the "very heavy" teaching loads which existed without distance education. The principal commented that,

> The quality of instruction has improved in this school since distance education came in, but we're unique here in the sense that we have always had a fair respect for correspondence courses. Our students did well on correspondence even before distance education because of the way we were set up, the way we supervised and monitored. I think that set us apart from other schools which shunted kids off to the library and nobody had any contact with them. But we have always maintained contact; we had carrels in classrooms or working stations in classrooms, and we monitored schedules even before distance education came along.

The principal concluded that the completion rate in this school was "very high," and "the failure rate has been very low." Distance education "allows us to have the best of both worlds, the individual self-learning aspect as well as the teacher taking a lot of responsibility for the students' learning." The principal believed that distance education had provided his school with "a balanced program, which I think is going to help students when they get to university to be better organized."

Issues

The principal explained that when distance education started in his school it had "abolished" some of the electives. These electives were no longer viable and able to be offered because students were choosing from a larger selection of distance education courses. The principal commented that,

> I thought that distance education took too much away from our complementary program, because we had Drama 10, Typing 10, Computer Literacy, Record Keeping 10, Law 20, and a few course like that became redundant after distance education came in." The principal added:

> If you'd come to me four years ago as this abolition was occurring, I would have said that was my major concern. I guess the reality is that you don't get any choice

> as to the way it is, so you carry through, and as long as the students are happy with the greater variety of distance education courses, then that's the way we go.

Although distance education had been adapted without much upset within the school, a recent consortium policy directive concerning late submission of lessons to tutor-markers was seen as a major issue in this school. The consortium policy indicated that students' lessons would receive a zero if they were any later than the scheduled submission of the next lesson. The principal saw this matter as an attack on the autonomy of the school and the professionalism of the school staff. The principal stated that,

> I like to control what happens in my school, with the cooperation of the teachers who are here. An extension of that is the distance education teachers [tutor-markers]. The problem is that the distance education teachers want the same ownership over students that they'd have if they were teaching right here in my school.
>
> Really what I would like to have is a marking and consultative service, and the ownership stays with us, where we set the contracts with the students, we carry them through, and if there are to be penalties attached we'll deal with them. Because in my interpretation the principal is the one who's ultimately responsible for the school program and how it operates.
>
> In this particular instance the way distance education is being organized under the consortium, the distance education teachers would like to penalize students if lessons are late. I'm saying, "Hold back. We don't need that. You just provide a marking service and a consultative service for students when we can't provide the expertise, but don't go beyond that. We'll handle the rest."
>
> So I've had quite a debate with the consortium people in terms of trying to say, "Look, let the tutor-markers just mark, and let them get the results back to us, and we'll handle the final grading components."

Summary of Part 2

Of the 22 schools in the consortium, 20 had one to three years' involvement with the distance education pilot project before the consortium began in September, 1990. Of the 10 schools surveyed, eight schools had joined the pilot project at some stage during its three years of development. The two schools which were new to distance education also reflected the experiences of the pilot project. The arrangements cautiously implemented in these latter schools were based on a feasibility study by Clark (1990) which relied heavily on his expertise and knowledge gained from the pilot project.

The distance education arrangements varied to some extent from school to school, but generally each school had well established and successful programs. Most respondents were able to quote completion rates in the high 80 and 90% range, and relate stories of the success of individual distance education students. There were various reasons given for this success. Some schools charged their students so much per credit, and in most cases refunded this "deposit" when they completed or passed the course. Some respondents suggested that their students succeeded because they "pushed" them and "by being nasty." However, while the self-disciplined students must take credit for their own successes, many students undoubtedly benefited from the enthusiasm, commitment, and the day-to-day encouragement of concerned and interested teachers and teachers' aides. Most schools had some form of direct supervision, and an advisory system whereby teachers provided extra tuition for distance education students outside the teachers' regular classes and during their own time.

All but one of the schools surveyed had a dedicated distance education room. Most of these rooms were very comfortable and well equipped learning environments, which according to several respondents had a very good effect on student learning. As one coordinator commented, "this is a very pleasant room. . . . I think the impact has been very positive; the students enjoy working in this environment."

One aspect common to all the schools visited in this consortium was that distance education had replaced the correspondence mode with outstanding success. While correspondence had been used extensively in all these schools, the completion and pass rates were reported to be as low as 20 to 30%. In contrast to these results the distance education completion and pass rates were reported to be about 90% and as high as 98%.

Chapter 7

WEST CENTRAL ALBERTA DISTANCE EDUCATION CONSORTIUM: ORGANIZATIONAL ARRANGEMENTS AND ISSUES

This case study describes the organizational arrangements implemented by the West Central Alberta Distance Education Consortium (WCADEC) to provide distance education for senior students in small schools. It is the third of five similar case studies of three consortia and two autonomous jurisdictions. The following description is based on data from interviews of key participants in four jurisdictions and eight schools in the consortium. The description of the organizational arrangements is supported by documentation, the researcher's observations, and guided by the two major study questions:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

2. What are the critical issues concerned with these organizational arrangements?

The chapter is in two parts; "Consortium Arrangements" and "School Arrangements." Both parts address question one. Issues, which are the focus of question two, are dealt with as they arise throughout the chapter.

PART 1: CONSORTIUM ARRANGEMENTS

The consortium context is described and the member jurisdictions and schools are listed at the beginning of this section. These details are followed by a description of the consortium structure and management and discussion of related organizational issues. The remainder of Part 1 is concerned with the key role of the consortium director, and consortium initiatives to provide a Japanese language program and agricultural courses for its students.

Consortium Context

The West Central Alberta Distance Education Consortium (WCADEC) was formed in March 1989, and has provided distance education for high school students since the start of the 1989-90 school year. Similar to CEDEC none of the schools in this consortium have been part of the initial distance education pilot studies. In most other respects this consortium was found to be significantly different to CEDEC. The management structure, and tutor-marker arrangements were different; greater emphasis was placed on policy and operational procedures, and jurisdictional cooperation and autonomy appeared to pose no problems. The most significant differences were the employment of a full time consortium coordinator--designated the consortium director--and the employment of regular classroom teachers as tutor-markers.

At the time of the survey this consortium was in its second month of its second year of coordinating distance education in 13 schools and nine jurisdictions. Seven of those schools in four jurisdictions were surveyed; two schools in the Rocky Mountain School Division, two in the County of Mountain View, and two in the County of Lacombe, as well as a separate system school at Leduc. The seven schools surveyed exhibited similar characteristics and distance education practices and will be discussed collectively in the second part of this chapter.

The West Central Distance Education Consortium covers an area of about 36,000 square kilometers, which is about half the size of the Big Sky consortium, and twice as big as the CEDEC consortium. This consortium takes in the central west section of Alberta from the Calgary Trail in the east to the Rocky Mountains along the British Columbia border in the west; and from Leduc and Jasper in the north to Carstairs and Cremona in the south.

Much of this area is made up of the Rocky Mountain foothills and prairie lands in the north. Parts of the consortium are also in close proximity to Edmonton and Calgary and surrounds the city of Red Deer. Consequently some of the consortium's distance education schools are in towns which are "bedroom communities" for the larger centres. Unlike most rural towns these communities have been expanding, and their schools were experiencing the usual growing pains of not having enough room. This consortium is bounded by first class highways and expressways and serviced by an extensive network of paved rural roads. Although these roads are difficult to travel during the winter months of the school year, in the past many high school students have traveled to larger schools which could provide them with access to broader curriculums. Distance education has provided alternative educational opportunities for these students and at the same time made the smaller rural schools more viable.

A schematic map in Figure 7 and a list of the jurisdictions and schools in Table 11 are provided for clarification. Figure 7 indicates the position of the schools within the consortium boundaries, and underlining indicates the schools surveyed for this case study. In Table 11 the schools are listed against their jurisdictions, and underlining indicates the seven schools and the four jurisdictional offices visited during the survey.

Figure 7

Map of the West Central Distance Education Consortium

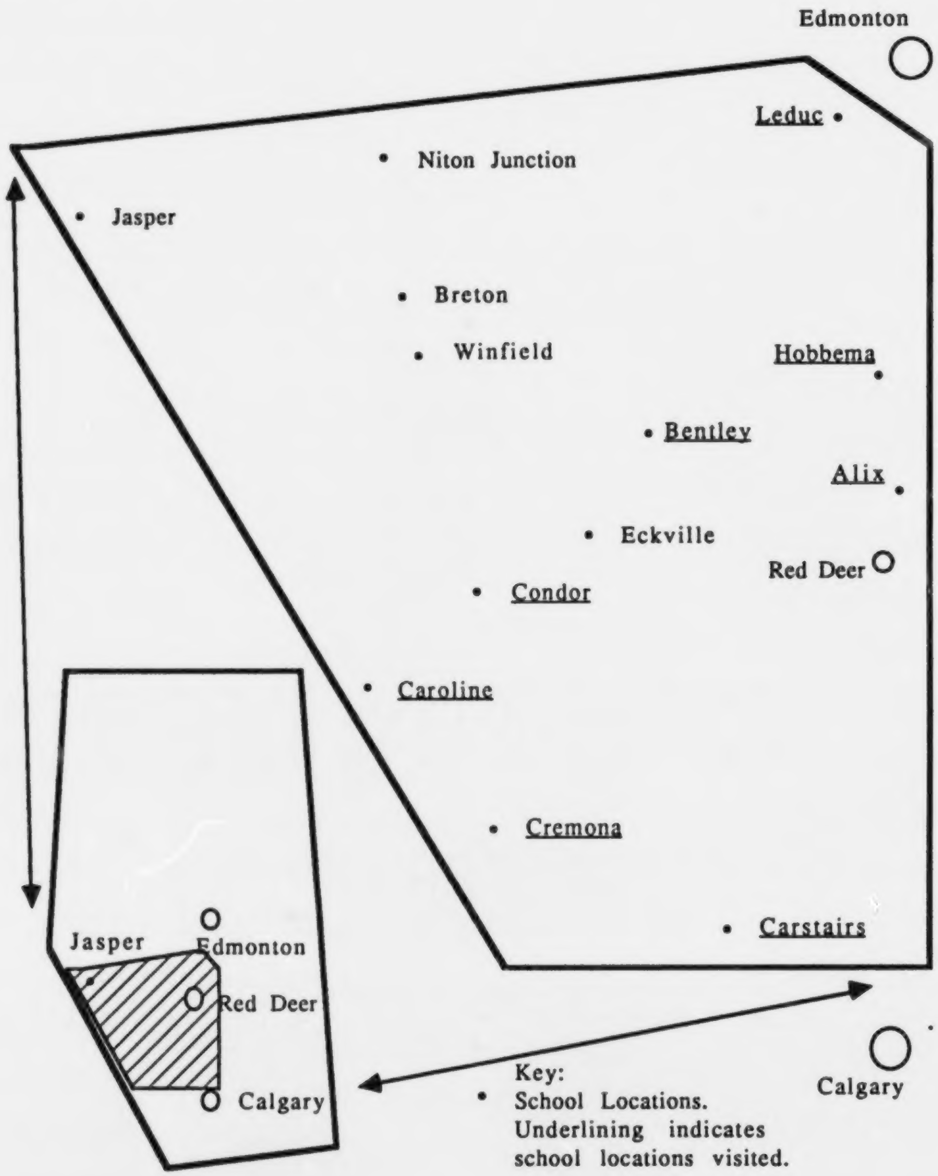
Edmonton
Leduc
Niton Junction
Jasper
Breton
Winfield
Hobbema
Bentley
Alix
Eckville
Red Deer
Condor
Caroline
Cremona
Carstairs
Calgary
Jasper
Edmonton
Red Deer
Calgary
Key:
• School Locations.
Underlining indicates
school locations visited.

Table 11

List of Jurisdictions and Schools

Consortium Members	Schools
1. Rocky Mountain School Division	David Thompson School
	Caroline School
2. County of Mountainview	Cremona School
	Hugh Sutherland (Carstairs)
3. County of Lacombe	M A C C Alix School
	Bentley School
	Eckville High School
4. Leduc Roman Catholic Separate School District	Christ the King School (Leduc)
5. Samson Band Board of Education	Samson Alternate School
6. County of Wetaskiwin	Buck Mountain School (Winfield)
7. Jasper School District	Jasper High School
8. Twin Rivers School Division	Breton School
9. Yellowhead School Division	Niton Central School
*10. Olds College	
----------------------------	----------------------------
Nine school jurisdictions and one associated college.	Thirteen schools

*Olds College provides agricultural courses to the schools in the consortium, but is not a full member as a signatory to the consortium agreement.

Consortium Philosophy, Organization, and Tutor-Marker Arrangements

A deputy superintendent explained his jurisdiction's rationale for joining a distance education consortium as follows:

> We felt that for distance education to work, you have to have tutor-markers available, and we just didn't have enough people in our system or enough resources to hire them all ourselves. Secondly, we felt very strongly that there was a need for some coordination and direction, and we didn't feel that we had the expertise to provide that, so the opportunity to be involved with someone like [the consortium director] was a real advantage.

While the reasons for joining this consortium were similar to those given in the previous consortium, the philosophy and organization that surrounded this organization were unique. Even the terminology for designated positions indicated an entrepreneurial approach which was unusual for educational organizations. The consortium coordinator referred to his position as the "consortium director," school coordinators as "school representatives," and he preferred the concept of "delivering teachers" as opposed to tutor-markers. The director explained, "I looked at the [consortium] system that was operating down in the southeast of Alberta, and I didn't particularly like what I saw," but added that "I quickly formed my own ideas on how the system should be organized."

> We adopted the philosophy that the organization of the consortium was more important than the technology, and that we would set up the organization then apply the technology.
>
> If you look at the other consortia, the technology has determined the organization. The CML and the VAX machines predetermine your organization, or if you've got tutor-markers outside the school, they predetermine your organization.
>
> What we have tried to do is create a superschool, so now we've got thirteen schools we're scheduling like one big school, and as we develop and get the organization in place, then we'll apply the technology to it.

According to the director, students in this consortium have access to any high school diploma course they want out of any of the member schools. The teacher expertise in the various member schools is shared, and the teachers in the schools provide almost all the tutor-marker services. Only one teacher, who was supplying 75 credits of business courses, was not employed in a school at the time of this survey. The director explained that,

> Our philosophy is a bit different from the other consortia. Where they have external tutor-markers, we use our teachers in the schools. We think that some of the money coming into distance education should be used to maintain a good staffing ratio in the schools, then by rationalizing your program you can release individual teachers in those schools to accommodate students from other schools.
>
> Also I think it's important to have teachers in the schools, because teachers are more than just markers. Instead of someone sitting out there on the farm, tutor-marking and faxing stuff backwards and forwards to fifty students, why aren't they in the school being paid in the regular way and taking part in all the school-sponsored activities?

The director commented that apart from the "one [external] tutor-marker. . . there must be 70 or 80 teachers in the schools" who teach distance education courses. Using this model of sharing teacher expertise, 1000 course credits were expected to be exchanged between the consortium's schools each semester during the 1990-91 school year:

> We look for teachers in the various consortium schools who can handle the different courses and work it from there. You can see from the schedule here that it's quite complicated, you've got to have a strong system in place to operate it, because it's not just a matter of phoning up a tutor-marker; it's a matter of me collecting information from all the schools on what they can offer, and then I become a broker for all the courses they need, and then I schedule those courses into the schools. What I try to do is balance the schools out so that nobody's got a major deficit or a major credit unless that's what they want.

While the aim with this multi-school model is to balance the number of distance education course credits "received" with the credits "delivered" by each of the consortium schools, according to the director it depends on the school whether they wish to balance their distance education costs with their income from tutor-marker services. Some schools "have opted not to deliver a lot [of credits]. . . . They're prepared to pay rather than hire additional staff."

A multi-subject model of distance education was also in operation in the schools throughout this consortium. In each school there is at least one class of students taking different courses with distance education materials. A classroom teacher facilitates the process, and tutor-marks the lessons. The director predicted that during the 1990-91 school year students in the consortium's schools would take 2500 course credits this way.

Consortium Management

Once again the importance of the Consortium Agreement for the management and binding of this collaborative organization was recognized by the participants in this consortium. Similar to the other consortia, the development of a comprehensive document was difficult and time consuming, and the production of a definitive agreement has yet to be achieved by this organization. Eighteen months after prospective members of the consortium were first brought together, the director stated in his first annual report that, "the Consortium Agreement took a lot more time to complete than I anticipated, but after four rewrites, I think we have a good working document. . . . I would like to thank the many people. . . who helped us sort out this complex document."

Consortium Agreement

The WCADEC Agreement is included in Appendix F. Similar to the example in the previous case study, this agreement has considerable merit, but failed to deal with all the essential elements concerned with the management and operation of the consortium. To begin with, the agreement does not adequately explain the business of the consortium. The central concept of balancing the "receiving" and "delivering," or buying and selling of distance education course credits, was not addressed and no reference was made to the teacher-tutor-marker concept and role. The phrase, "facilitating the provision of distance education," was the only reference to the actual business and daily operation of the consortium.

The agreement's main purpose was to describe the "management structure of the Consortium," which according to the agreement consisted of two levels of government, referred to as the Board of Governors and the Management Committee, and managed by a Consortium Director and an Agent Board. While the agreement adequately defined the role of the Board of Governors and the Agent Board, it was deficient in its description of the Management Committee's role and the Consortium Director's role. Irrespective of these deficiencies, the two levels of government, the Agent Board, and the director's role are described and discussed below.

Board of Governors

The highest level of the consortium's management structure, the Board of Governors, consists of a school board representative from each of the member jurisdictions. According to a deputy superintendent this body met at least four times during the implementation year to develop policy and a workable management structure described in the consortium agreement. The Board of Governors' responsibilities were dealt with thoroughly in the agreement, and the following list of "powers" has been condensed and paraphrased as follows:

1. To establish policy governing all matters related to the effective and efficient delivery of distance education.
2. Establish a Management Committee.
3. Review and recommend the annual operating budget.
4. Do all things incidental to the effective and efficient delivery of distance education programs.
5. Enter into agreements with other persons, agencies, and institutions for the provision of distance education services.
6. Appoint the Consortium Director.

Management Committee

The next level, the Management Committee, is made up of four voting members and four non-voting members and met "about four times" during the first year. The voting members include the Chairman of the Board of Governors and three superintendents or their representatives from member jurisdictions. The four non-voting members include the consortium director, the Secretary/Treasurer and the superintendent of the Agent Board, and a representative from Alberta Education. The Consortium agreement's general, but inadequate, prescription of the Management Committee's role and responsibilities are stated as follows:

> The Management Committee shall do all such things as are reasonably required to be done by the Minister [and] by each of the parties hereto in respect of distance education and shall do so on behalf of the parties hereto.

Agent Board

The Agent Board in this case was the The Rocky Mountain School Division because this was the jurisdiction which had provided the initial impetus to form the consortium. According to the director, "the previous superintendent--he's in the Regional Office now--is a very strong supporter of [distance education]. When the program first began he was one of the leaders in the development of the consortium."

The Agent Board's role is of fundamental importance for the legal and financial operation of the consortium and is dealt with in the agreement in the following statements:

> The Agent Board shall provide the services of a Secretary/Treasurer.
>
> The Agent Board shall in all cases act as the legal entity on behalf of the Consortium.
>
> In carrying out the terms of its agency, the Agent Board agrees to act in accordance with the directions of the Management Committee and in accordance with the policy decisions of the the Board of Governors.

Financial Arrangements

The consortium's financial arrangements concern three aspects, the role of the Agent Board, membership fees, and course fees.

Although the Agent Board's role was not clearly defined in the consortium agreement, the consortium director explained that the Agent Board is responsible for the consortium's financial matters, and in particular the management of funds for the course credit exchange between schools.

The second aspect concerns the membership fee which supports the administration of the consortium. According to the director,

> Each school pays $6000 to be a member of the consortium; that's an up front $6000. They pay that out of their distance education grant. . . . Because you've got to have some sort of guarantee that the administration of the thing is funded if you do it by a surcharge on the credits. How do you know whether you are going to get enough money to pay my salary and the secretary's salary and all your overheads in the office? So $6000 was set because with that figure we felt that we could operate the administration of the consortium, and each school is getting enough money to do that sort of thing from the distance education grant.

The third aspect concerns the course fees. Each school pays $60 per distance education course credit "received" from other schools, and is paid $60 per credit for tutor-marker services "delivered" to other schools. The consortium director explained these arrangements as follows:

> I think the sixty dollars came from the Alberta Correspondence School. They indicated that they were going to start charging $300 for a five-credit course, so we just divided by five and got $60 a credit.
>
> The sixty dollars a credit is money which is exchanged [through the Agency Board] between schools. For example, Cremona is receiving 97 credits. . . and delivering 181 credits, so they have a credit balance of 84 credits at $60 a credit. So Cremona is earning $5000. Now if you go to the other side, Alix School is receiving 99 credits and they're delivering none this semester, so they will have a debit balance of about $6000.

Because the tutor-marking is predominantly done by teachers who are regularly employed in the consortium schools, the matter of their payment, and related working conditions, was not an issue in this consortium. The consortium director explained that the employment of the external tutor-marker for a small number of credits was a temporary strategy and permanent teachers in the schools would be employed as tutor-markers whenever possible.

Consortium Director's Role and Responsibilities

Although the director's role and responsibilities were extremely important in the operation of the consortium, this position was not explained adequately in the Consortium Agreement, nor was this role mentioned in the Consortium Handbook which provides a role statement for all other individual roles involved with the consortium's delivery of distance education. The director's duties referred to incidentally throughout the Consortium Agreement are paraphrased as follows:

1. Arrange meetings for the Board of Governors when required.
2. Act as secretary for the Board of Governors meetings.
3. Act as secretary for the Management Committee Meetings.
4. Inform members about the business of the consortium.
5. Approve payment of consortium debts by the Agent Board.
6. Keep accurate records of the Board of Governor and Management meetings, and ensure prompt distribution of the minutes and other relevant information to members of these committees.

While the lack of a more specific job description in either the agreement or the handbook can be seen as a deficiency, this situation has allowed the director a great deal of freedom to develop and perform an emerging role. Whether it was intentional or not, this lack of specific direction was also an indication of the governing bodies' high regard for the ability of the individual holding the position. As the director commented,

> I didn't apply for this job; I was invited to take it on. . . . I was principal at the time. . . . The superintendent asked me to do the original research work to see whether I thought it would work, and then they gave me a three year contract, but I have a job back here as principal if I want to come back.

Previously the consortium director had been the principal of a rural school with about 400 students. His experience as a principal was reflected in his approach to the director's role and his focus on working with the school principals. He saw the director's role in terms of being the principal of a "super school" and "in charge of organizing the [consortium] schools into some sort of unit that can operate cooperatively."

The director explained that the most important part of his role was developing cooperation.

> In my view most of the work is in the start-up time. The most important part of the job is the PR, where you go around to the schools and talk to the principals and get

> them to know you and understand where you're coming from and what the program will do. As you get to know them then it becomes easier to work as a team.
>
> I think probably one of the successes of this particular consortium is that we've established some very good working relationships between myself and the principals, and I'm not sitting out there on my own; we're working together.

A deputy superintendent gave his view of other facets of the consortium director's work as follows:

> [The consortium director] coordinates the brokerage of courses back and forth. One school may indicate that it'll do the marking and provide a tutor for Spanish or accounting, whereas another school might do the same thing in Mathematics 31. And he arranges and coordinates that sort of thing, keeps track of the number of students that are taking the courses so that there is some equalization of services or payment if you provide more service, those kinds of things.
>
> The most important thing [the consortium director] has done, I think, is increase the understanding of what can be done, and he's done a really fine job with inservice and promotion of the concept of distance education.

Unlike the consortium coordinators in the previous case studies, the WCADEC director was employed full-time coordinating the consortium's work, and given a three year contract to establish the operation. This situation was even more exceptional given that this consortium was much smaller than the other two consortia and in terms of course credits bought and sold was about a third of their size. The director expressed dismay that his counterparts in the other consortia were not given the same opportunity and time to develop their organization.

> As far as being full-time is concerned, I think that in the future this job could become part-time. Once all the infrastructure is in place and the thing is up and going, and people understand what's happening, then I think my role can diminish.
>
> But I think it was important in the initial stages that time was spent in the schools with the people and talking to them and their staff and doing things like that.
>
> When I listen to the other coordinators at meetings we've been to, one of the things that strikes me is that they need more than a part-time position to do this.

Issues

Costs and the full-time director. The consortium director commented in his annual report that "often things do not work out the way we planned" and that "there were times during the year when I felt we were taking two steps forward and three steps back, but when I look at where we are today, compared to this time last year, I realize that we have made some major strides forward." This progress had changed the director's view that he would need three years as a full-time coordinator to develop this organization, and doubted that it was necessary for the consortium to bear such a cost. The director stated that,

> The cost of running the consortium has been uppermost in my plans and thoughts over the past year and I think we should continue to look for ways to bring down these costs. . . . It seems that the role of the Director could and maybe should diminish as the organization of the consortium develops and as the participants become more familiar with its operation.

A superintendent disagreed strongly that the consortium director's role should "diminish" and be reduced to a part-time position. The superintendent expressed the view that during the director's three year tenure tremendous changes and challenges would have to be met and that "the job will undergo some transition and change," but that the position would be just as demanding in the future.

> Within our consortium some people are suggesting that a lot of [the director's] work has been accomplished and that his job might be downsized. That's one perspective. I don't share that perspective. I think that [the director's] job must change and grow, but I'm not sure what it will look like in three years. It depends on a whole parcel of factors.

Leadership. Previously the director had been the principal of a relatively large and well established school. The local superintendent obviously had chosen the director because of his leadership which was apparent in the director's previous school, and which the director also demonstrated in the operation of the consortium in many ways. The director demonstrated an inherent understanding of what had to done, and how it had to be done to make the consortium work effectively. His leadership style appeared to be strong in both the "structure" and "consideration" dimensions described by Owens (1971) and quoted earlier in Chapter 5. The director also exhibited creative and entrepreneurial characteristics which were not identified in Owens' (1971) leadership dimensions, but appeared to be essential attributes in developing a collaborative organization such as a distance education consortium.

Consortium Initiatives

Japanese language program. The director explained that part of his consortium work had included the development of a Japanese language program which he had begun three years earlier as school principal. This program was then shared with a neighboring school and taught in a traditional mode. When the consortium was formed the director sought government funding and support from the Alberta Correspondence School to develop distance education course materials for a Japanese language course. At the time of this survey the latter parts of the course were in the process of being produced and piloted throughout the consortium.

The director was involved in bringing Japanese teacher interns to the consortium's schools to assist with the development and presentation of the language program. At the time of this survey, the director was negotiating the placement of Japanese high school students in the consortium's schools as a means to complement the language program and as a means for the member jurisdictions to earn extra income. At a meeting of the WCADEC the director indicated that each Japanese student would be paying about $5000 per year to attend school, and that each jurisdiction could accommodate up to 10 of these students. The director also expressed the hope that the host schools would be rewarded and encouraged to support this program, and that the jurisdictions would put the income for accommodating these students "back into the school in some way." In describing the progress of this program the director reported that,

> I have been in contact with Mr. ______ who is involved in bringing Japanese high school students to Canada and have a commitment from him that our consortium will get first placement choice of any students he brings in. He anticipates that he will have available for us, in the region of 50 students for the 1991-92 school year, and I will be working towards getting the placements in our consortium.

The director suggested that there was some resistance on the part of Alberta Education to the Japanese language program because students "can't learn to speak Japanese in three years." However, the director explained that,

> The object of the exercise is to get students interested in the Japanese language, so that when they leave school they might go on to university and take a Japanese major and a business minor, or an engineering major and a Japanese minor. . . . So what we're trying to do, is create an interest as well as give them some ability to speak Japanese.

Association with Olds College. Olds College provides agricultural courses to the schools in the consortium, but does not participate in any other way. According to the consortium director,

> Olds College has a loose association with the schools, and we use Olds College to deliver some courses. . . . We prefer to call them vocational-type courses. So if students are interested in agriculture and interested in going to Olds College, we can offer them 8 or 9 different college courses which are written up in the distance education fashion.

The director explained that these elective courses are not necessarily marked by Olds College. "Some of them, with multiple choice kinds of questions, are marked in the school, but the final exams are controlled out of Olds College. An assistant principal related that this arrangement had worked exceptionally well for three of his students who had taken one of the agricultural courses.

> We had three grade 11 students take a Soils 100 course from Olds College last year. Two of them were fairly good academically, one was average, and they all had farming backgrounds. Compared to the students at Olds College, they did very well. They all passed, but two did very well.

The school coordinator added that apart from being appropriate courses for a rural area and recognized as elective credits for the high school diploma, the students could receive credit for these courses if they eventually enrolled in a program at Olds College or one of three associated agricultural colleges.

Summary of Part 1

Part 1 of this chapter dealt with the consortium organization, management structure, and the key role of the consortium director. The unique arrangements of this consortium were highlighted and compared to the contrasting aspects of the other consortia described in the two previous case studies.

The financial structure based on a fee for each participating school was radically different, the terminology for designated positions and the use of personnel was unique, and unlike the other consortia the consortium director was employed full-time. Seventy or 80 "delivering teachers," who were employed as regular teachers in schools, provided the distance education tutor-marking. Consequently the tutor-marker's role and related working conditions did not appear to be significant issues and, unlike the other case studies, these aspects were not addressed independently in this chapter. Similarly the jurisdictional representative's role did not appear to be as significant as it was in the other consortia. While the jurisdictional representatives were members of the Governing Committee and four of the representatives were part of the Management Committee, much of the decision making was left to the consortium Director.

However, the director's enthusiasm and vision did appear to be significant to the consortium's operation and progress. Both aspects are evident in the following comment.

> I think when our initial three year trial period is completed, we will have in place a system which has gone a long way toward the creation of a "super school" and that all the schools involved in the concept will be offering successfully a spectrum of courses which will match a program typical of a very large high school.

PART 2: SCHOOL ARRANGEMENTS

The distance education arrangements for the seven schools surveyed in four jurisdictions are summarized, in the order they were surveyed, in Tables 12 and 13.

The information in the tables was derived from interview data. The and include a list of organizational variables, identified by participants, in the left-hand column. The body of the tables is made up of the numerical approximations of students, course registrations, course credits, and the "yes" tabulations. The "yes" tabulations provide an overview of the existing school arrangements according to the information provided by participants. While these tables may not be complete or exact, they appear to reflect certain trends within each jurisdiction and school.

The tables indicate that the "multi-school" and the "multi-subject" models of distance education have almost completely replaced the correspondence mode, which had been used extensively in all of these schools before the establishment of the consortium.

Most respondents indicated that curriculum expansion and provision of courses to satisfy individual student needs were the main reasons for using distance education. Supervision, scheduling, coordination, clerical assistance, and support for students through teacher advisor arrangements were other variables identified and described by participants. These elements, and other aspects of the distance education arrangements listed in the tables will be supported by interview data, documentation, and observations by the researcher in the following discussion and description.

Table 12

School Arrangements in Rocky Mountain S.D. and County of Mountainview

	Rocky Mountain S.D.		County of Mountainview	
Data[1] For:	School 1	School 2	School 1	School 2
High School Students	~120	~107	~130	~98
D.E. Students	~40	~54	~20	~50
D.E. Course Credits[2]	62	106	74	97
D.E. Models:				
ACS (Correspondence)	--	--	--	--
Computer-Based (CML)	--	--	--	--
Multi-Subject	Yes	Yes	Yes	Yes
Multi-School	Yes	Yes	Yes	Yes
Reasons Given For D.E. Use:				
Curriculum Enrichment	--	--	--	--
Curriculum Expansion	Yes	Yes	Yes	Yes
Curriculum Enhancement	Yes	Yes	Yes	Yes
Personalized Learning	--	--	--	--
Individual Student Needs	Yes	Yes	Yes	Yes
To Access D.E. Funds	--	--	--	--
D.E. Room/Dedicated Facility	Yes	Yes	Yes	Yes
D.E. Students Timetabled	Yes	Yes	Yes	Yes
D.E. Supervision:				
Scheduled Teacher	Yes	Yes	Yes	Yes
Back of other classes	--	--	--	--
School Coordinator:				
Principal	--	--	--	--
Assistant Principal	Yes	--	--	--
Teacher	--	Yes	Yes	Yes
Teacher's Aide	--	--	--	--
Clerical Assistance	--	--	Yes	Yes
Teacher Advisor System	--	--	--	--

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[1] As of November 15, Semester One, 1990/91.

[2] D.E. Course Credits include credits tutor-marked outside each school.

Table 13

School Arrangements in County of Lacombe and Leduc R.C.S.S.D.

Data[1] For:	School 1	School 2	School 1
High School Students	~66	~89	~100
D.E. Students	14	12	35
D.E. Course Credits[2]	99	44	167
D.E. Models:			
ACS (Correspondence)	--	Yes	--
Computer-Based (CML)	--	--	--
Multi-Subject	Yes	Yes	Yes
Multi-School	Yes	Yes	Yes
Reasons Given For D.E. Use:			
Curriculum Enrichment	--	--	--
Curriculum Expansion	Yes	Yes	Yes
Curriculum Enhancement	Yes	Yes	Yes
Personalized Learning	--	--	--
Individual Student Needs	Yes	Yes	Yes
To Access D.E. Funds	--	--	--
D.E. Room/Dedicated Facility	--	--	--
D.E. Students Timetabled	Yes	Yes	Yes
D.E. Supervision:			
Scheduled Teacher	--	Yes	Yes
At the back of other classes	Yes	Yes	--
School Coordinator:			
Principal	--	--	--
Assistant Principal	Yes	--	--
Teacher	--	Yes	Yes
Teacher's Aide	--	--	--
Clerical Assistance	--	--	--
Teacher Advisor System	--	--	--

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[1] As of November 15, Semester One, 1990/91.

[2] D.E. Course Credits include credits tutor-marked outside each school.

School Arrangements throughout the Consortium

Seven of the 13 schools in the consortium were surveyed with respect to their distance education arrangements. Because the arrangements are basically similar, the seven schools will be discussed as one group rather than individually. The differences that exist among the schools will be highlighted in the discussion which will be guided by the organizational variables listed in the tables.

Schools, Students, and Credits

The tables above indicate that only a small number of distance education course credits are taken by the students in each of the schools listed, but this is not a true indication of the amount of distance education in the consortium's schools. According to the director, during the 1990-91 school year, students were expected to register in only 2000 externally marked credits. However, the bulk of the distance education course credits are not registered with the consortium, nor are they included in the tables above. The director reported that, "possibly," students would take another 2500 distance education course credits which would be taught and marked in the schools. This appeared to be a conservative estimate. A principal indicated that students in his school would take a total of 740 distance education course credits during the year, but only 200 of these credits would be registered with the consortium and marked outside the school. Accurate numbers for other consortium schools were not available, but it appeared that they were also teaching and marking between 200 to 500 distance education credits for their own students.

Information about the success of the internally taught and marked courses was not sought but, from incidental comments made by respondents, results from this model appeared to be comparable with traditional classroom instruction.

While information was sought about the success of the externally tutor-marked courses in terms of the completion rate, the consortium director and other respondents were reluctant to provide such information. When asked about his students' completion rate, an assistant principal stated, "I don't recall what it was. Last year was our first year, so we're still stumbling and crawling a bit. I can't give you an accurate figure." A principal in another school commented that, "last year it wasn't too bad. I wouldn't want to guess; I never figured it out. This year I think we'll be much higher than last year, mainly because we're able to keep better track of the students." A deputy superintendent explained that the completion rate for each school had been calculated and that one of his schools "had the highest completion rate of any school in the consortium last year. It was somewhere over 75%, so it was good."

Although some respondents were obviously embarrassed by their students' low distance education completion rates, it must be stressed that the consortium director reported that the distance education "success rate," which meant students had completed and passed the course, was much better than it had been with correspondence courses. It should also be noted that the success rate, or completion rate, during the consortium's first year of operation appeared to be no different to that experienced in the other two consortia during their initial years of distance education.

The consortium director reported that during the first year the success of distance education was adversely affected by an inadequate supply of distance education material and difficulties in implementing and developing an effective infrastructure, which everyone could follow.

A deputy superintendent also commented that many students were initially unable to cope with the "lack of structure" with this mode of learning. The superintendent suggested that students in their final years in school were unable to manage their own learning.

> Student's don't realize and perhaps at the age of 16, 17 or 18 are not capable of saying, "If I'm going to complete this course by January 31, I have to do this amount of work now," and unless there's a teacher who works with them and encourages them to do that, then the students have not been able to pace themselves and commit themselves to it.
>
> The other concern is that, to a large a large extent, the courses are very paper-and-pencil oriented, so if a student doesn't read too well or doesn't write too well, they don't do well on a distance education course. A lot of the students who

> are opting for the distance education courses are the ones that have difficulty in reading and writing, so I think we have to make better use of some other forms of technology if it's going to be viable over the long term.

Distance Education Models

Throughout the consortium there were basically two distance education modes in operation; the multi-subject model and the multi-school model.

Multi-School Model. Externally tutor-marked distance education is referred to as the multi-school model in the tables, and described in detail in Chapter 4. The coordination of this model constitutes the consortium's main function of "brokering" the distance education credits and tutor-marker services between schools. In this case the consortium's work of providing tutor-marker services overlaps to some extent with the staffing of its member schools. With only one exception, the "70 or 80," tutor-markers are employed within the consortium schools. The director explained how this situation was organized in his school.

> In this particular school we're on a sixty-seven-minute period, which gives you 24 periods per week, and the teachers are expected to teach for 21 periods. Some teachers might have 19 of those 21 periods in a regular classroom and two assigned to distance education. For every one period which is assigned to distance education, they have the potential to be a tutor-marker for three or four students.
>
> What we try to do is find an organizational system in a school which will allow most teachers to take part in this, even if they only have the capacity for three students.

According to one of these tutor-markers this situation has not changed his work as a teacher. "Really it hasn't changed anything, because distance education is just part of my daily routine. I still teach classes. The only difference now is that I have some students who are not in this school." An assistant principal explained that, "we have eight of our staff involved [as tutor-markers] out of a staff of 14," who also have "regular classroom assignments."

> For example, one of my English teachers has one period a week that he is assigned up to three distance education students. I have another staff member in mathematics who has three periods a week of distance education. Because mathematics doesn't

> involve as much marking as English we can assign up to four distance education students a period.

The assistant principal added that "once the students are assigned to the teachers they become their responsibility, and the teachers do the faxing and the communicating with the other schools." Another principal commented that in his school

> Almost all the teachers in the high school are involved as tutor-markers. My mathematics teacher is doing some, the other social teacher and I are doing it; my English teacher has picked up a couple of students from outside and next semester will be using a distance education English package with a doubled-up class next semester; my industrial arts teacher is marking lots of Mechanics 12 and drafting from outside the school. About the only ones who aren't involved are the home economics teacher and my physics teachers.
>
> And I should mention that they're being super about it. I think they all agree that distance education and the way it's organized is a good thing, and they are trying to make sure it works.

In another school, instead of giving teachers tutor-marking as part of their assignment, teachers with full assignments were asked to volunteer to take on extra tutor-marking. The assistant principal explained that,

> We asked the staff at the beginning of the year how many would be interested in marking courses from other schools, and I think there was a good response given that the teachers aren't getting anything back for it. . . . I believe there are four or five of us involved right now.

The coordinator in the same school described another scenario to encourage teachers, who have small enrolments in their classes, to be tutor-markers.

> What we can do now is go to these teachers and say, "You've only got 10 students in this class. We will run this class, but could you take four or more distance education students from another school?" By doing this we have the opportunity for four of our students to take a distance education course.

Unfortunately this situation had placed extra stress on at least one willing teacher. According to the school coordinator,

> We've got one teacher who took on an extra marking load and more than she could handle. She didn't have a large enrolment in accounting, and she thought six extra distance education students wouldn't be too bad. But it is. There's a lot of marking in those accounting courses.
>
> She thought distance education was a good program, that it should go, and wanted to do her part, but maybe didn't realize the amount of work that she was taking on. If she had taken on three distance education students, then maybe it would have been okay, because at the same time she is involved in coaching.

In another school a teacher was tutor-marking a number of distance education students to save a Spanish program which she had taught for many years. According to the principal,

> Distance education has allowed us to still run some of our smaller classes such as Spanish, which has been a tradition in this school. Even though the number in Spanish 20 fell to only five students, we picked up another 10 students throughout the consortium. So rather than the course dying, distance education has allowed us to continue with it. The teacher has five kids in the classroom and another 10 students outside in other schools.
>
> We do that in a number of courses. In a small school with courses like physics, you find that the numbers really change from year to year, depending on the abilities and interests of your students. So one year we'll have physics with 15 students, and the next year, even though its on the timetable, what happens if you only have five students? Do you tell those students, "No you can't do physics?" This way, it allows us to maintain a lot of those courses that we would have lost otherwise.

Only one school was surveyed that did not provide tutor-markers for the consortium, but there was no reluctance to do so. According to the assistant principal, "we provided tutor-markers last year, but we haven't so far this year because of our tight scheduling, and because we brought in a whole raft of new staff this year. Next semester we'll probably be able to offer some teacher time if there's a demand." The consortium coordinator commented that both the jurisdictions and the teachers are more in favor of this system than the system with tutor-markers outside the schools.

> I think they're a lot happier than they would be with the other tutor-marker system. For a school like David Thompson, which is delivering 236 credits and receiving 62 [in semester one], about $10,000 is coming into the school to help maintain its staffing ratio. If it wasn't for that extra money in this particular school they would have lost another half teacher, but they've maintained that half teacher because they know they're going to make money on distance education.
>
> The teachers in this school also know that if it wasn't for the distance education program there would be less staff in this school, and of course they don't want less staff in this school so it becomes like a trade-off for them.

Multi-Subject Model. The other model used extensively throughout this consortium is referred to as the multi-subject model in the tables above and described in Chapter 4. Throughout the consortium's schools this model is a combination of traditional instruction and distance education in a "split" class. That is, different courses are taught in the same classroom by a teacher who uses the distance education material.

An assistant principal explained that,

> We ran a a Mathematics 33-31 combined last year with two teachers in the classroom using distance education packages. It allowed students to work at their own pace, and it allowed the teachers to do a lot of over-the-shoulder teaching.

Another principal reported that within his school distance education material was used in two classes in different ways.

> I have a Social 23 and a Social 30 at the same time. I teach the Social 30 and use distance education packages for the 23. I spend time with them, but mainly they use the packages. I mark the packages. They don't leave the building.
>
> My physical education teacher is teaching a Social 10-13 split. He and I have a lot of discussions, and he's having a few problems with it. There's a lot of kids in there, thirty something kids. But if I didn't have the distance education package it would be almost impossible for him to handle without a tremendous amount of extra work.

The principal also explained that using distance education this way allows flexibility, provides good teaching material for a broader curriculum, and allows small schools to keep up with the changes in the high school diploma.

> It's allowed me that flexibility to lump classes together. It's allows flexibility, even if I didn't have a double class, to use the package as part of my program. I like the packages for the Social 13-23 series, because most text-books are written at a level well above their reading level and the kids have a terrible time, whereas these packages I'm using are written in a simple manner and there are a lot of pictures, which is good for these kids.
>
> Part of the problem we face as a small school is offering enough courses, so I have a choice: Do I eliminate courses, or do I try to carry the same program, plus all the curriculum changes and additions like Social 13-23 and the new science courses. How do I keep up to all these changes with the number of staff I've got in this school.
>
> And if I look at the present definition of distance education, simply put, it means using anything in a manner that allows you to expand your program, and that's what it's doing for me. Hopefully using the definition that way allows me to obtain grants, and the grants should cover the distance education materials.

Reasons Given for Distance Education Use

According to the consortium director, "we've set up a system whereby the kids can get just about any course they want. . . . If you look at the [organizational] board, almost every course that's in the [Alberta Correspondence School] handbook is on that board." The director also pointed out that the curriculum in the consortium schools had been enriched considerably with a series of Japanese and agricultural distance education courses.

The reasons given for using distance education generally agreed with the explanations in the previous case studies. Respondents claimed that distance education expanded and enhanced the curriculum, and provided for the individual needs of students. A school coordinator commented that,

> This year we have students who are taking German, Japanese, and Spanish. There's no way we could offer those courses on our own in this school. As well as these we have students taking quite a wide variety of courses that normally we wouldn't be able to offer in a school this size.

But, there were also other aspects which emerged in this case study. Distance education was used as an organizational tool to provide flexibility for scheduling teachers and timetabling students, and allowed these small schools to keep up with the changes in the high school diploma. Several respondents suggested that distance education provided flexibility for schools to provide for the individual needs of students, but had not radically changed the organization of these schools. This application was consistent with the director's philosophy that "the organization of the consortium was more important than the technology," and that distance education was to be used to complement and improve the existing organization, but not replace it.

A principal explained that initially he expected to use distance education to overcome his staffing and timetabling problems and enable the school to offer some split classes in social, English, and mathematics, but commented that students have benefitted from the flexibility provided by distance education in other ways. According to the principal students are now able to say, "If I fail this course I can re-take it next semester, I don't have to come back next year, and I can graduate like normal." The principal also remarked that,

> The second major thing--and this is a real surprise--I've got kids coming to me wanting to take courses I never dreamed of: Spanish for example. Kids are taking Spanish and Japanese and opting out of French. . . . If we can find markers in the schools for a course they can take anything, but it's a problem sometimes to find markers for the variety of courses they want. . . . The demand this year caught us totally by surprise, and I think that it's going to grow.

Another principal also expressed some surprise with the way students had reacted to the opportunities provided through distance education.

> Now we find students taking courses for interest's sake, and they're taking extra courses. It also allows them to direct their education a little more. Before we had distance education it was a matter of "You either take typing or home economics this period," because they were the only courses available at that time. Now they can do art, psychology, or law, and they're able to try different subjects and get an idea about different careers. I've really noticed a difference in the attitude of the kids as far as discipline is concerned and there's a more positive attitude towards school in general.

A deputy superintendent provided a more conservative comment.

> For a long time we've believed that students in the smaller schools should have equal access to the types of programs that exist in our larger schools, and even prior to distance education we staffed the schools in such a way that we could maintain at least two tracks in each of our smaller high schools. Distance education just allows us to increase the number of courses that are available to students.

The technology coordinator for one of the jurisdictions supported this view, but also added another important point about keeping students in the small schools and keeping the schools viable.

> We have a system goal to provide high-quality programs to students no matter where they are in the county, so we have looked at distance education to give us greater capability for offering a wide range of programs for the small high school populations, and we're talking populations in the neighborhood of seventy students.
>
> We also have an unusual situation here. Because the distances are not too great there's a tendency for students to want to come to the larger high school, and that, of course, depletes the resources of the local school and makes the local school less and less viable.

A principal in one of the small schools commenting on the impact of distance education stated that,

> The main impact would be that we're holding more students and we have more high school students in our classes than we had before [distance education].
>
> For the first time, and I've been here for eighteen years, this is probably the first time that we didn't have one of our students request permission for busing to Lacombe. . . . Students who were in our school last year were familiar with distance education and wanted to stay here.

This was the case in another jurisdiction, and according to the deputy superintendent,

> The year before we introduced distance education there were quite a number of students from Cremona who decided to drive down to Cochrane and take their grade 12 at Cochrane rather than continue at Cremona, because they wanted a wider selection of courses. That didn't happen the year distance education was introduced.
>
> I think [the parents] see distance education as a commitment to keep a smaller school open. There's been a great deal of concern in Cremona over quite a long period of time about whether or not the board really supports the Cremona school. From our perspective it's a very viable operation, but we haven't been very successful in convincing the community that we see that, but I think [the distance education commitment] is further evidence that the school is viable and supported.

Facilities, Scheduling, and Supervision

An assistant principal commented that the structure in terms of a distance education classroom, scheduled classes, and teacher supervision was important if distance education was to be successful, particularly for the weaker students.

> We have a staff member assigned for every period in that [distance education] classroom. The students are assigned to that room just as if it was any other class in the school. . . . We found that students need the structure of a class setting. As I said, the motivated students, no problem; they can work on their own. They're never the problem, but the weaker students need that structure to help them get things done on time.

Facilities. Four of the seven schools surveyed had provided a room exclusively for distance education, and in all cases they were regular classrooms with no alterations. Very little technology had been installed, except that a fax machine had been installed in one distance education room to allow the supervising teachers to fax students' lessons while supervising. A deputy superintendent described the distance education facilities that existed in his jurisdiction, and explained a situation which appeared to exist in most of the surveyed schools.

> Our facilities are not adequate, and you'll see this is a real problem in both of our schools, there is no room set up for distance education as such. We've tried to create one, but it's not a good space. We need to get the facilities up to speed, but we haven't got to that, and we haven't got a good room for them to work out of.

A school coordinator commented that,

> I do have a room for distance education, but it could be better. I'd like to have individual carrels so that students could work and not be disturbed by other students. For languages it would be nice to have headphones and tape-players so that students could work on their own in the carrels. I'm not sure how the teleconferencing should be set up, but we need a better method so that it's easier for students to communicate with their tutor-markers.

At another school, which had experienced an increase in student enrolment partly because of distance education, the principal had been unable to provide a room just for distance education. The distance education students sat in other classes, the library, or went home to study. The principal was pleased with the distance education program, but stressed the need for a distance education room. "We're right out of space, but I would like to see one room as a distance education room where the distance education students could work under supervision, and where they could have a quiet spot to go."

Scheduling and supervision. While the trend in this consortium was to schedule distance education students and provide teacher supervision, there was no uniformity with the arrangements. Because of staffing constraints, lack of facilities, and the "old concept of correspondence" different scheduling and supervision arrangements had evolved.

In a school which had provided extra staffing, and had sufficient space for a distance education centre, the assistant principal remarked that, "we have a classroom set aside. We have a staff member assigned for every period in our week to be in that classroom."

In another school which had employed a half-time distance education coordinator, the principal commented, "I do have a distance education room, that's [the coordinator's] room, but when he's not here it's not open. I don't have a supervisor who can sit in there and just supervise; that's my problem." The principal was in the process of rectifying this situation and commented that "we talked about this problem last staff meeting, and when the coordinator is not here we might put the students in classrooms with other teachers."

In a school where extra staff had not been provided to supervise or coordinate distance education, the assistant principal had taken on the coordinator's role and students were supervised by teachers in regular classes. According to the assistant principal, "the way our distance education students are timetabled, they simply go into a class where somebody is teaching at the time the student is taking distance education. We tried to match them, as well as we could, with teachers who could help them."

The arrangements in another school tended more towards the "concept of correspondence," where "the school assumed very little responsibility." The assistant principal explained that,

> We allow the students to select a course, and then they're responsible to [the coordinator] for meeting deadlines in terms of handing in their material. . . . If they don't hand the lessons in on time, then they must work in their spares on the distance education courses. If their lessons are turned in on time, they have the benefit of doing them when they want.

Coordination, Clerical Assistance, and Teacher Support

The distance education coordinator at the school level is referred to as the "In-School Distance Education Representative" in the Consortium Handbook (see Appendix G). The in-school representative's role, as the hub of the operation at the school level, is extensively dealt with in the handbook. A school representative summarized the role as follows:

> There is a coordinator in each school, and we facilitate the courses we receive from, or deliver to other schools. We receive the materials from the the students, and we distribute it to the teachers. We register students, keep the students up to date, set up schedules for them to complete assignments by a certain date, and we basically

> help the student get through the program. We supervise the final exams in our schools for the other teachers. We receive everything and we distribute everything.

The handbook lists 15 aspects of the coordinator/representative's responsibilities. Irrespective of the name, the in-school representative's evolving role is probably more aptly described by the term "coordinator." According to the handbook the representative is responsible for four broad areas; coordinating materials, coordinating students, coordinating teachers, and coordinating examinations and marks.

In the seven schools surveyed, two assistant principals and five teachers were employed as distance education representatives. While one representative was given only a three period allowance, another was employed three-quarter time to coordinate and supervise the distance education students. In the other schools the time allowance for the representatives ranged between the two extremes of a few periods and three-quarter-time.

While five of the distance education representatives were experienced teachers, the two women representatives were relatively new to teaching. One had been employed to be the three-quarter-time representative in her first year of teaching, while the other had volunteered to be a half-time distance education supervisor and representative in her second year of teaching. Similar to the female coordinators in the previous case studies these women demonstrated an enthusiasm and an aptitude for this work that wasn't apparent with their more experienced male counterparts. When asked how they felt about coordinating distance education, one representative said, "It's great. I'm glad I took this on because I've learned a lot, and found it adds a challenge to teaching; it's a different aspect of it." The other representative said, "I love it because you have an entirely different relationship with the students. You can be more than just a teacher."

Clerical assistance was provided in only two schools in the same jurisdiction, but only for a few hours each week. Because the representatives were usually responsible for the clerical work, some chose to do most of the work themselves, or organized other supervising teachers to share the work. While this consortium provided only a third of the course credits externally marked in the other consortia, there was less need for clerical assistance, but it should be noted that using teachers to do the clerical work associated with distance education appeared to be an inappropriate use of expensive and scarce resources.

There was no instance, in any of the schools surveyed, of an organized teacher advisory system for the distance education students. Apart from the scheduled distance education supervisor and the distance education representative, students appeared to be very much on their own. But as one deputy superintendent noted, this was neither good nor bad. It was just another opportunity for students to learn from their distance education experience. He suggested that students should attempt to take control of their own learning, and part of that control is being able to seek help and use other resources which are readily available in a school environment.

Issues

Material supply. The director expressed the view that most participants were generally pleased with the progress of distance education in their schools, but remarked that while "I'm very happy with the way it's going, there are some problems." He explained that,

> The worst problem is the one which is common to everybody, and that's an inability to get material on time, but I think we'll get that one sorted out next year.

The director stated in his annual report that,

> The Alberta Correspondence School and the Learning Resources Distribution Centre were not prepared for demands which were placed on them for newly developed materials and there was confusion about where orders were to be sent. Consequently, there were major delays in getting materials to students. This contributed to the lower completion rate, some dissatisfaction, and a certain amount of loss to the credibility of of distance education in general. Hopefully these delays will be resolved in the coming year.

An assistant principal described a situation which was common to most of the schools visited in this consortium.

> We've had a positive response from the parents until the time comes when the student hasn't done the work. . . or the materials haven't arrived.

> We've got students who have just received their materials in the first part of November. So they've been waiting for two months to get started, and for three, four, or five periods a week they've been sitting around with nothing to do.

The distance education coordinator in this school explained that the order for the distance education material was not sent until September 6 because

> We don't know until the beginning of September what courses the kids want. . . . I thought if we got an order in on September 6, that it would be sent right away, but most of it was put on back order when it was sent in."
>
> Three weeks wouldn't be an unreasonable amount of time to wait. I think three weeks is as long as you should have to wait, and students are willing to wait that long. But once you hit the end of September, that's already a month out of the course if they're doing it in one semester. It's tough on the students.

Although the supply of some distance education material had been an issue in the previous case studies, to a large extent the problem had been overcome by pre-registration of students and ordering of materials as early as June. That is, three months before the start of the next school year. There were also instances of schools, jurisdictions, and consortium stockpiling of materials in case they were not readily available from the supplier at the beginning of the school year.

Turnaround time and timelines. The consortium director commented that "the other problem with this system is the turnaround time, and putting in place an infrastructure which everyone will follow." The director explained that "we have developed a handbook" in an attempt to explain the infrastructure and improve the efficiency of the system.

> There have been several instances where some teachers have taken much longer than the 48 hour turn around time for lessons. . . . Unfortunately in some cases the credibility of the system was considerably damaged by such delays.

According to the director, students were also at fault for not keeping to their time lines, and had caused considerable problems for the tutor-markers with late submissions. The director stated in his annual report that, "there were several instances where a teacher received up to 10 lessons on the 20th of June or later."

Abandoning old concepts. In his annual report the consortium director indicated that some schools were inclined to organize distance education in the same way correspondence courses had been handled in the past. Some schools provided the learning material and little or no guidance and supervision, with the result that the student success rate was very low. The director wrote:

> Schools need to abandon the old concept of correspondence courses and switch their thinking towards the concept of distance education. This was not easy because high school principals were used to signing a correspondence form for students who would then receive the course from Alberta Correspondence School and proceed through the work with very little effort or supervision on the part of the school.

This attitude was evident in the comments of several respondents who described instances of "very little effort or supervision on the part of the school." In one example, students who were in their first year of distance education, and not completely comfortable with such a situation, were allowed to work when and where they preferred, attend class only if they needed assistance, and as long as they submitted their assignments on time, did not need to attend a scheduled distance education class. However, the results were poor and although the assistant principal blamed the inadequacies of the distance education material, he also acknowledged that the new supervision arrangements included regular student attendance and teacher supervision, and continuous monitoring of students' work.

In his annual report the director reminded consortium members that the success of their organization would depend on the successful completion of courses and that schools must assume more responsibility for regular monitoring and daily supervision of their distance education students.

Critical role of principals. In the director's annual report he referred specifically to the inservicing of principals to promote the concept of distance education. The director stated that,

> It was critical and obvious that the principals would play a major role in this whole project and that it could be successful if the principals cooperated with the

> consortium director, with each other, had a major role to play in the organization and were convinced that the total program would be of benefit to their schools.
>
> A great deal of my time was devoted to visiting schools, talking to principals, forming a good working relationship, discussing the total concept of distance education, and trying to gain their confidence. As in all situations of this type, some principals required more time than others and I felt that this was due more to the personality of the individual than problems that needed to be solved.

Technology. The consortium director's annual report also contained a comprehensive summary of the possibilities of technology and the problems experienced with technology in the delivery of distance education courses in this consortium. Although there was a range of technology available and a great deal of time was spent exploring its "viability and usefulness," the director concluded it was "very clear that that the main work-horse of the system will [continue to] be the fax machine and its use will continue to grow." The director wrote:

> A teleconferencing system is also in place in all schools, but to this point in time has not been used very much. Schools have relied more on student and teacher calls on a regular telephone rather than the newer system. The teleconferencing system does present scheduling problems and it will take time for the schools to get used to this system and to address the scheduling problem.

The director also explained in his report that the "data transfer computer system," which may be linked with the audio-teleconference system to provide live visual communication between the teacher and a group of students, was "still in its infancy." The director commented that although three schools had already invested in this system, it had not been used and suggested that "four things" were needed to make it work.

> 1. A teacher in each school who has an interest in becoming more knowledgeable about the system.
>
> 2. Computer programs which have been developed for specific courses.
>
> 3. Schedules developed where the teacher and the student can be connected at times suitable to both.
>
> 4. A toll free line between schools to eliminate the high costs of on-line time.

The director had also investigated the viability of the Digital Microvax Computer to operate the Computer Managed Learning (CML) mathematics programs, and concluded "it was obvious that there were advantages in having such a machine in all our schools, but the costs were prohibitive."

The director made a general statement that it would be "a long time before the [computer] system assumes a major role in the delivery of courses, and I recommend that we do not invest any further money in this particular technology."

Summary of Part 2

At the time of the survey this consortium was just beginning its second year of distance education. While each school surveyed had contributed some of its own organizational peculiarities, generally the arrangements were similar throughout the consortium.

Two basic models of distance education dominated the arrangements. The multi-school model was similar to that used in the other consortia except that, as a rule, the tutor-markers were employed in the consortium's schools. Altogether "70 to 80" tutor-markers were spread throughout the consortium's schools. Each of these school based teachers tutor-marked no more than 50 distance education course credits, and as little as three credits.

The multi-subject model of distance education was also used extensively throughout the consortium to accommodate multi-subject or multi-level classes. This was an innovation that had not been used widely in the other consortia, but had been so successfully adapted in this consortium's schools that more credits were provided by this mode than with the usual multi-school model.

While the reasons for using distance education centred on curriculum expansion, enhancement, and individual student needs, there was an underlying theme that the curriculum had been enriched considerably by the addition of languages and agricultural college courses.

Although the success rate, or completion rate, with the externally marked courses was not as high as participants would have liked, distance education was found to be far superior to the correspondence model. By the start of the second year most participants had implemented strategies to increase the success rate. Participants were more aware of the importance of a distance education room, scheduled classes, teacher supervision, and the role of the principal. They were also aware of the need to abandon old concepts of correspondence education, and the difficulties with the application of new technology.

Most participants expressed the view that they were only in the early stages of implementation, and expected the organization of distance education to continue to change and improve. Because they were at the centre of this organization, the school representatives in particular exhibited a greater awareness of what could be done and how it could be done better in the future.

Chapter 8

THE COUNTY OF CAMROSE AND THE COUNTY OF LEDUC: ORGANIZATIONAL ARRANGEMENTS AND ISSUES

This chapter includes two case studies of autonomous jurisdictions which have implemented their own organizational arrangements to provide distance education for senior students in small schools. The following descriptions are based on data from interviews of key participants in each of the two jurisdictions. The descriptions of the organizational arrangements are supported by documentation, the researcher's observations, and guided by the major study questions:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?
2. What are the critical issues concerned with these organizational arrangements?

The description of the context and tabulation of the distance education arrangements implemented by each jurisdiction will be followed by a description of each jurisdiction's arrangements. The issues concerned with these arrangements will be addressed as they arise throughout the chapter.

TWO AUTONOMOUS JURISDICTIONS

Case studies of these two autonomous jurisdictions were included with this collection because they are independent operations, and because they have different perspectives to contribute to this overview of distance education. Although both jurisdictions had the option of joining one of the consortia already described, they chose to organize their distance education systems with their own five or six schools. These autonomous organizations also demonstrated an industry and creativity within their jurisdictions that was not always obvious in the larger consortia.

County of Camrose

The City of Camrose is located about 75 kilometers south east of Edmonton. The land surrounding Camrose is used mainly for growing grain, and like most rural areas in Alberta the viability of the small communities and their schools scattered throughout this district are being threatened by a declining population. The County administers 10 schools in an area of approximately 3500 square kilometers. The five schools with a high school component each have an average of about 60 senior students. One of these schools has only 37 senior students, which is three less than the number of students required to keep the high school operating, but the school has been kept open because of the school's involvement with distance education.

County of Leduc

The County of Leduc's central office is located at Nisku, 20 kilometers from the centre of Edmonton. Because of its close proximity to Edmonton, and the oil and gas industries, this predominantly rural area has a mixture of agricultural industries, secondary industries, small acreages, and "bedroom" communities for people working in the surrounding area and Edmonton. While the County administers 15 schools, five of these schools have a high school component with an average population of about 120 senior students. The County covers an area of approximately 2000 square kilometers which runs parallel to the east-west boundary of Edmonton. The five schools involved with distance education are relatively close and are bounded by an area which is only one-thirtieth of the size of the largest consortia surveyed, or one-seventh of the smallest consortia surveyed.

A schematic map in Figure 8 and a list of the two jurisdictions and schools in Table 8 are provided for clarification. Figure 8 indicates the position of the schools within the jurisdictional boundaries, and underlining indicates the three schools visited in the survey. In Table 14 the schools are listed against their jurisdictions, and underlining indicates the three schools visited during the survey.

Figure 8

Map of County of Camrose and the County of Leduc

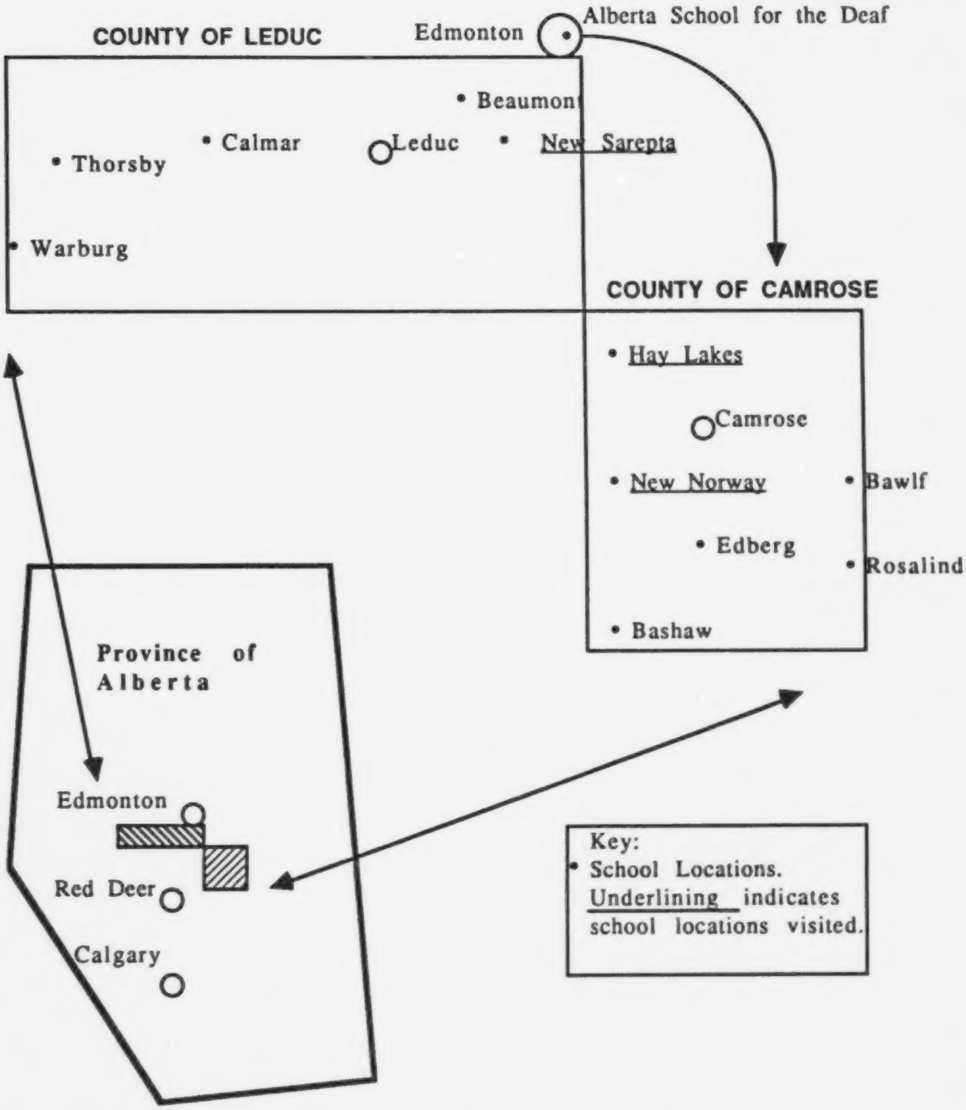
COUNTY OF LEDUC
Edmonton
Alberta School for the Deaf
Beaumont
Thorsby
Calmar
Leduc
New Sarepta
Warburg
COUNTY OF CAMROSE
Hay Lakes
Camrose
New Norway
Bawlf
Edberg
Rosalind
Bashaw
Province of Alberta
Edmonton
Red Deer
Calgary
Key:
School Locations.
Underlining indicates school locations visited.

Table 14

Jurisdictions and Schools Involved with Distance Education

Autonomous Jurisdictions	Schools
County of Camrose	Hay Lakes School
	New Norway School
	Bashaw School
	Bawlf School
	Rosalind School
	Edberg School
	Alberta School for the Deaf (Edmonton)
County of Leduc	New Sarepta High School
	Beaumont High School
	Calmar School
	Thorsby High School
	Warburg High School
	Leduc Community Education Centre

* Underlining indicates schools and central offices visited.

School Arrangements

The distance education arrangements for the two jurisdictions are summarized in Table 15. The information in the table was derived from interview data, and includes a list of organizational variables in the left-hand column. The table is a general description of each jurisdiction's distance education arrangements, and is made up of the number of schools involved, the total number of course credits in each jurisdiction, and the tabulation of the "yes" responses where appropriate. The "yes" tabulations provide an overview of the existing school arrangements according to the information provided by participants. While these tables may not be complete or exact, they appear to reflect certain trends within each jurisdiction and school.

The tables indicate that the "multi-school" and the "multi-subject" models of distance education have replaced the correspondence mode, which had been used throughout these jurisdictions before the establishment of distance education.

Similar to the previous case studies, respondents indicated that curriculum expansion and provision of courses to satisfy individual student needs were the main reasons for using distance education. Supervision, scheduling, coordination, and clerical assistance were other variables identified and described by participants. These elements, and other aspects of the distance education arrangements listed in the tables will be supported by interview data, documentation, and observations by the researcher in the following discussion and description.

Table 15

School Arrangements in County of Camrose and County of Leduc

Data[1] For:	County of Camrose	County of Leduc
Number of Schools	5, plus School for Deaf	5, plus Community School
Total High School Population	~300	~600
D.E. Course Credits[2]	~1300	~400
D.E. Models:		
ACS (Correspondence)	--	--
Computer-Based	--	Some
Multi-Subject	Yes	Yes
Multi-School	Yes	Yes
Reasons Given For D.E. Use:		
Curriculum Enrichment	--	--
Curriculum Expansion	Yes	Yes
Curriculum Enhancement	Yes	Yes
Independent Learning	--	Yes
Individual Student Needs	Yes	Yes
To Access D.E. Funds	Yes	Yes
D.E. Room/Dedicated Facility	Yes	Some
D.E. Students Timetabled	Yes	Yes
D.E. Supervision:	Yes	Yes
Scheduled Teacher	Usually	Usually
Back of other classes	Some	Some
School Coordinator/facilitator:		
Principal	Yes--all schools	Varies
Assistant Principal	--	--
Teacher	--	--
Teacher's Aide	--	--
Clerical Assistance	Yes	Yes, but no extra for D.E.
Teacher Advisors for Students	--	--

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[1] As of November 15, Semester One, 1990/91.

[2] D.E. Course Credits include credits tutor-marked outside each school.

County of Camrose Arrangements

The County of Camrose distance education cooperative of six small schools was two months into its second year at the time of this survey. Although only five schools have a high school component, the teachers in the sixth junior high school provide some teacher expertise and tutor-marker support. Interviews with a deputy superintendent, and the principals of two participating schools, indicated that this autonomous operation had made considerable progress during its short implementation phase.

Autonomy

The deputy superintendent, who was also the distance education coordinator, explained that after investigating and considering the options the jurisdiction decided not to join one of the larger consortia, but to organize its own distance education system.

> We felt big was not always better. I didn't believe in the economy of scale in this case. I knew, because of the way consortia had set up distance education, that purchasing courses was going to be very, very expensive, and I realized we couldn't afford it.
>
> A lot of talk went on in an ephemeral and a conceptual way, and really I can't think at that level; I've got to be fairly concrete. I need to know how much it's going to cost for delivery, for hardware, salaries, and whatever. I couldn't see it working financially the way the big consortia were going about it.
>
> I went to the Central East and the Central West distance education consortia meetings. I heard a lot of squabbling, I heard a lot of grandstanding, I heard a lot of people making a name for themselves. I wasn't satisfied with the way it was going, and by that time we had begun to build our own little box; we had begun to build our little empire here by ourselves.

One of the local principals suggested that being autonomous had its advantages and that the level of cooperation was "excellent." He commented that the principal/coordinators know each other well and regularly "meet as a group, talk about our problems, and look at who's going to teach what. It's been excellent, and we've had good leadership from the central office as well."

> It's the only way to go. That's why we don't have any problems [with distance education] in our County, because we only have our County principals to deal with, and we see each other every month at our principals' meetings. If there's a small

> problem we iron it out there. It's ideal and the only way to go as far as I'm concerned.

The deputy superintendent explained that with the expertise that was available even in six small schools, and five of these schools receiving the distance education grant, it was feasible for the jurisdiction to operate its own mini-consortium.

> Our board felt that the distance education idea was marvelous, but over the long term they chose not to put in a large amount of money. At the beginning they did put in a lot of seed money. The Central West was doing a study on how a Central West Consortium would work, and we threw in two thousand dollars. . . . Then after a while it was to be another six thousand dollars. At that point I suggested to the board that the Central West costs were growing like topsy and we could do something a little better in a more confined way.
>
> In the early days, when we started setting up distance education, there was no money available from the Distance Education Branch. The funds came along after you were up and running. So the board was good enough to fund the whole thing to get it off the ground on the assumption that the grants would cover the rest of it.

The deputy superintendent commented that in this jurisdiction, "if the grant folds then so does distance education." This reaction was a little hard to understand considering the possible cost advantage of rationalizing classes and courses throughout the jurisdiction's small schools, but according to the deputy superintendent the County could not afford the extra teaching and clerical staff to run the program without the grant.

> The high-cost item is staffing. The only way we can keep ourselves in the black now is to add on to our in-class numbers with distance education students, and making that class of four into a class of fourteen with 10 distance education students. Of course, we would generate an enormous profit if we didn't hire point one teachers, and a half-time teachers' aide in each of our schools.

While the financing of the program was a problem in that it relied on the distance education grant, the deputy superintendent expressed the view that the jurisdiction was glad to be able to remain autonomous and make its own financial decisions. "The money that we collect is our own. If we make it work, fine; if we don't make it work then we'll fail because of our own mistakes."

Except for providing course credits to a small number of students at the School for the Deaf, the jurisdiction's distance education operation was confined within its own boundaries. Consequently the establishment of membership fees and course fees to support an external tutor-marker and administration infrastructure were not important facets of this operation.

The deputy superintendent commented that the involvement with the School of the Deaf had very little effect on the County financially.

> We're just charging the School for the Deaf the basic cost of the courses. . . . Because we've got those courses on the go anyway. They are courses that we're currently teaching, and if a teacher has an enrolment of 10 then one more student making it 11 won't make much difference. We haven't finalized what we are going to charge, but we're probably going to use the fee schedule the Correspondence School would use for their courses; between $80 and $130 for the whole course.

The deputy superintendent commented that these fees were quite reasonable when you compare them with the "$500 for a five-credit course that the the other consortia are charging." He explained that the high costs to support the infrastructure in the other consortia was a significant factor in this jurisdiction's decision not to join one of these organizations. The deputy superintendent commented, "I couldn't buy into that; their costs were too high."

Schools, Students, and Course Credits

According to the deputy superintendent "the County of Camrose Distance Education Consortium has been operating for a period of just over one year. In this one-jurisdiction consortium there are five [sic] high schools which transmit Alberta Correspondence School lessons to one another." Actually there are six schools involved with the distance education program in this jurisdiction. An "unfunded" junior high school was supported by the jurisdiction with extra teaching and clerical staff so that it could provide industrial arts and home economics courses to the five high schools in the jurisdiction.

A school from outside the Camrose jurisdiction was also involved with this consortium in a unique experiment. The deputy superintendent explained that,

> I suppose we're seven schools now, because we do service the Alberta School for the Deaf. . . . We offer a fairly broad spectrum of courses, and we are able to accommodate all the requests from the School for the Deaf. When I say "all the

> requests," right now there are four [senior] students who are taking a total of seven courses.

To a question about how the tutor-markers communicate with the deaf students, the deputy superintendent replied that apart from the written material faxed to the students, the tutors are able to use the telephone:

> A hearing person answers the phone and signs to the student if there is a problem with their work. But we've also had our teachers go up to the School for the Deaf to meet the students. A busload of teachers went up, and they were left in the cafeteria with the students when the interpreter was called away. So the teachers, who didn't know sign language, were left with the deaf students, and it went wonderfully well. It was absolutely amazing. By gestures and happy and sad faces, and writing the odd word on napkins in the cafeteria, and a sequence of two or three words was enough to set off a conversation. I guess it was the equivalent of pidgin English.
>
> Our teachers were surprised at how well they could interact with a deaf person if they really put their minds to it, and I don't think there was ever an overwhelming problem with the students being deaf. . . . Now the School for the Deaf are using their transport to bring the students down to us. We do telephone, and we do a lot of faxing, but we also do some visiting as well.

According to the deputy superintendent, one unexpected outcome with the distance education program has been the increase in adult students in the jurisdiction's small schools. Apparently this phenomena has occurred because this jurisdiction is able to offer the distance education courses at a relatively low cost within its own system. The average cost is estimated to be about $25 per course credit compared to an average of about $80 per credit in the three consortia previously described.

> Our adult population has gone way up in our schools because of distance education. We've got mothers and grandmothers and whoever coming to our schools to take courses by distance education. And that's not a problem; they mingle with the rest of the students, and they do their thing.
>
> However the adults have a sobering effect on the regular students in the distance education classes, because they're finding that these adults are their parents' peers. I've heard these mature students say, "Johnny, your mother would be interested to hear what you've just said," and Johnny has taken a second reading on what he has just said and maybe changed it somewhat.
>
> I'd say that we have the most interest in business education, particularly with housewives doing Typing 20 on the word processor. While there's a lot of activity with the 10 and 20 level courses, a lot of the mature students now want to get into the classroom to do the 30 level courses with a teacher. But generally distance education is more flexible for the adult students.

The deputy superintendent explained that distance education has also provided more educational opportunities for the regular students, and allowed them to stay in their community schools.

> We're now able to offer our students courses which weren't available in our schools before distance education. . . . We might have even saved the odd student from going to the city school system where they could have accessed the basic academic courses and a range of what I call enrichment courses. But now we're also able to offer those enrichment courses, such as psychology, world geography , and all the other courses the students want.

However, the range of core courses offered by distance education had been reduced during the second year. According to a report by the deputy superintendent, "high school principals agreed that the teaching of mathematics and science would be better done via direct instruction, whenever possible. Thus the numbers of students enrolled in these [science and mathematics] courses has been reduced significantly."

Irrespective of this "significant reduction," during the first semester of the 1990-91 school year, students in the five schools were taking 1,241 credits in a total of 178 courses, or in other words each school was taking an average of about 240 credits and 35 distance education courses. Compared to the previous case studies, this situation indicated a moderate to high involvement in distance education considering that these schools each had an average of only 60 senior students.

Distance Education Models

Similar to the previous consortium, the multi-school model and the multi-subject model were used to provide distance learning in this jurisdiction.

Multi-school model. The multi-school model, which required the external tutor-marking of courses, was the predominant distance education model in this jurisdiction. As in the previous consortium, the jurisdiction's staffing of the tutor-marker services overlapped to some extent, with the staffing of its schools. All the tutor-markers within this jurisdiction are employed within its schools, and teach regular classes. The distance education students are sometimes added to those regular classes, or teachers with incomplete teaching assignments are asked to tutor-mark a certain number of distance education courses. A principal explained that, "we've come up with a bit of a formula. We ask a teacher to mark either four of five papers per forty minute period per week. So if a teacher had five extra spares or preparation periods in a week, we would ask him to do from 20 to 25 courses." It was assumed that if these courses were taken over a full year, then a teacher would be expected to mark 20 to 25, five credit courses per week for five periods. The deputy superintendent explained how this system is organized.

> At the beginning of every semester, we ask our teachers, "Who's interested in tutor-marking this or that distance education course?" and I think the schools have formed a pattern already. Some teachers regularly volunteer or are assigned a certain number of students to supplement their class because their enrolments are low, but other teachers are happy to come on board.
>
> The whole thing has stabilized now and some people know that they are going to do the tutor-marking all the time, others know they are going to do it some of the time, and others know that there is a very good chance that they will get an extra student or two in a particular semester.

While the existing staff provided most of the extra time required for tutor-marking, point one of a teacher's time and a half-time clerical assistant have been added to each school's staffing entitlement to coordinate and facilitate the distance education arrangements, and if possible maintain and monitor a 48 hour turnaround time for the transmission and marking of students' lessons.

Multi-subject model. A variation of the multi-subject model is also used throughout this jurisdiction, but not to the same extent, or in the same way it was arranged in the previous consortium. According to the deputy superintendent, this model was being used by some teachers who had a small number of students in class as well as a number of external students. To lighten the preparation and teaching load the teacher/tutor-marker was able to use the distance education material for the same course with all the students whether they were in the class or not. The deputy superintendent explained that while a teacher may have only four in a class and 10 distance education students, "she could be using distance education material with the fourteen students, or she could be using it with ten. . . . It's up to her, and there are mixed patterns of what happens in that regard throughout the County." This mixed pattern is actually a combination of traditional instruction and distance education and, although only one course at a time was being taught, this mode has been included in the tables as a multi-subject model.

Reasons Given for Distance Education Use

The basic reasons given for implementing distance education in this jurisdiction were similar to those described in the previous case studies, except that in this case there appeared to be a greater emphasis on accessing the provincial distance education grant. The deputy superintendent stated that without the grant distance education would not continue, irrespective of the benefits for students, because the County could not provide the extra finance.

Respondents indicated that basically this innovation had expanded the curriculum, enhanced the curriculum by providing opportunities to do core courses at other times, and provided opportunities to satisfy the individual needs of students. According to the deputy superintendent,

> Students generally agree that the benefits of distance education course delivery are twofold--a broader spectrum of courses from which to choose, especially in the vocational and other optional areas; and the flexibility in course completion rates which allows students to individually tailor their week-by-week workload. . . . They enjoy the flexibility it gives them, and they enjoy the freedom to decide when to complete a course or a unit of the work.

Apart from the usual reasons, the deputy superintendent stressed the importance of distance education in offsetting the cost of small classes and keeping the smaller schools viable. He also saw distance education and the provincial grant as the means to experiment with educational technology.

Class sizes and school sizes. The deputy superintendent commented that the County had implemented distance education partly to offset a problem with class sizes in its small schools.

> I can give you a couple of real-life situations to explain why we are using distance education. When I visited an English 33 class at one of our schools there were four students in the room during the first two periods. . . . I followed the same teacher into the second block of eighty minutes, and she had only four students in there as well.
>
> So distance education is being used to maintain classes and courses our students need. . . . A lot of our classes just weren't cost effective, so we've bolstered the regular in-class enrolment with some distance education enrolments.
>
> Now the English teacher with only four students in the class would have eight or 10 more students doing English 33 by distance education. So her teaching load has increased significantly, but with students from outside of her classroom or out of the school.

The deputy superintendent stated that "our County policy says, 'there will be seven students [or more] in a high school class,' and although we knew that had been broken in the past, distance education now keeps that policy alive, and we're able to keep as many course offerings going as possible."

As well as keeping the small classes viable, the implementation of distance education had also kept one of the jurisdiction's high schools viable. According to the deputy superintendent,

> In one of our schools the high school enrolment dropped below what we call the critical minimum enrolment that we can support in a school, but distance education has salvaged that situation. The cut-off is 40 students, and they had only 37 students, but because the teachers were teaching so many other students outside the school through distance education, the board considered that there were actually more than 37 students enrolled in the school. In fact distance education took them well over 40 students, because they were servicing 25 other students in other schools in the jurisdiction. So it's actually kept one of our schools open.

Technology. The deputy superintendent saw distance education and the provincial grant as a means to encourage the use of more educational technology and provide more technological hardware throughout the jurisdiction's schools. The deputy superintendent indicated that not all the available funds had been used to provide staff for the distance education program, but suggested that some finance had been allocated to the development of more sophisticated distance education technology for the future.

> Without us being able to handle a lot of this teaching internally, we'd have our hands out continually for more, so we're cutting back on the staffing, but the money we, in quotation marks, save, we're hoping to do other things with it that would improve the program.

A satisfied principal commented that,

> It's a good program, not only for the distance education right now, but having the equipment in our school for the future, and we know that the future is going to be very much dictated by some of the technology that's coming out. We have a satellite dish, teleconferencing facilities, a computer set-up, and we are ready for whatever technology will bring in the future, so it's excellent.

The deputy superintendent explained that only IBM computers were used in this jurisdiction, and that the central office was in the process of purchasing and installing an IBM 400 which would be networked to all the schools in the County. This computer system would complement the teleconferencing facilities, already installed throughout the County and eventually be used for audiographic communication in the distance education program. The deputy superintendent commented that,

> I'm very keen on interactivity between the student and the tutor-marker, or between the student and the program. So we're getting into this type of software because we feel it will enhance our course offerings and maximize the use of our technology. So what I'm saying is that we are looking for extra money to provide a better program. Some of our operating money is actually being spent on the hardware and software acquisitions, so that we can improve the offerings to the students.

Although this jurisdiction was interested in acquiring and implementing educational technology, there was no intention of using the Computer Managed Learning (CML) system promoted by the Alberta Correspondence School. According to the deputy superintendent, the Digital Microvax and the CML system were incompatible with the County's IBM computer system. He also expressed a rather negative view of the educational potential of CML, and commented that "computer-managed-learning was a misnomer; I thought it was more like computer-managed-testing."

Facilities, Scheduling, and Supervision

When asked about the distance education arrangements in the County's schools, the deputy superintendent prefaced his remarks by saying,

> Distance education throughout the jurisdiction is quite respectable. It has a respectable name and an air of "This is my free time, and I chose to do distance education in that free time, and I'm going to make good use of it;" It has that kind of air about it.

The respectability of distance education had obviously been established through the support and leadership of the County's administrators, but had also been influenced by the facilities and technology provided in each school. The deputy superintendent explained that each school had a distance education room for independent study, and that "our principals had a budget of $3000 to $4000 each to spend on their schools for distance education. It wasn't for computers; it was for computer tables and chairs and ancillary types of things, and it was up to them how they spent it."

While the County expected the distance education students to be timetabled and supervised, principals were also allowed a great deal of freedom in the way they actually organized distance education. The deputy superintendent commented, "I know this may sound loose, but it's not as bad as it sounds--we have a disparate level of functioning throughout the jurisdiction: Some principals do it this way, some principals do it that way."

At one of the schools surveyed, the principal explained that the distance education supervision arrangements were not fixed and depended on the student's situation.

> If a student wants to take a distance education course, we don't need to have class time for them to do that. If they want to do it totally at home, they can do it at home; I don't mind. That way we don't have to shorten our regular programs in order to run distance education. I look at distance education as supplementing our program, so I have some students who have a full load and will take distance education courses as an interest.

The principal explained that he viewed distance education as "independent learning" and staff were not scheduled to supervise, and generally the students were not timetabled into a particular class at a particular time. However, the students' progress was closely monitored by the principal with the assistance of the half-time teacher's aide, and the students' homeroom teachers. The principal commented that, "the homeroom teachers each have a file, which they check every morning for the distance education lessons to be handed back to their students." As well as returning the marked lesson the homeroom teacher was expected to take an interest in the student's progress and provide direction and encouragement. The principal saw this interaction as positive reinforcement not only for the student, but also for the teacher. He remarked, "I want all my teachers involved in it. If you don't involve your teachers in it, they're not going to be aware of what's going on, and they don't buy into it in the same manner. So every one of my teachers is involved in some way."

In the other school surveyed, the principal described his distance education supervision arrangements as follows:

> Our objective with the grade 10 students is for them to sit in with their homeroom class. With the grade 11 students, we give them a little more flexibility in that we have them with a class or in the distance education room, which is supervised for about half of the day, but it's across the hall from the office so I can monitor it, and the assistant principal can monitor it, and so can any other teacher. We've also asked a couple of teachers to take some spares in there if they have the opportunity to do so, and they do that once in a while.

Coordination, Clerical Assistance, and Teacher Support

The deputy superintendent was responsible for coordinating the tutor-marker services between schools within the jurisdiction. "I call myself the [jurisdictional] coordinator of it, but in fact the real coordinators are the six principals in the six distance education schools, so I suppose I'm the coordinator of coordinators." While the principals were responsible for facilitating distance education for their students, they were also responsible for the provision of their school's share of tutor-marker services. The deputy superintendent explained that because it was probably necessary to coerce or convince the school staff to volunteer their services as tutor-markers the recruitment of the principals as coordinators appeared to be vital to the success of this type of organization, and the principals initially sought this involvement as coordinators:

> When the prospect of distance education reared its head, all but one school was very keen to get going with it, and most of the principals wanted something to do with it. Maybe not to the extent of doing a lot of teaching, but they wanted to be involved in some way. We also felt in the office here that this was an instructional thing that should be under their control and they would have to become informed about it. . . and with the size of our schools it was best that the school leader was directly involved.

According to the respondents the half-time clerical assistant's role was also essential to the effectiveness of the distance education operation in each school. Each of the six County schools have a part-time distance education aide, who is responsible for the faxing, filing, and sorting. The deputy superintendent explained that the aides are also responsible for regularly checking student progress and making sure that "associated problems are expeditiously dealt with."

Although there was no organized teacher advisory system in either of the schools surveyed in this jurisdiction, students appeared to be well supported by the principals and teachers. In one of these schools all the senior teachers were encouraged to become acquainted with the distance education program and closely monitor the progress of their "homeroom" students involved in distance education.

Issues

The deputy superintendent indicated that administrators, teachers, parents, adult students, and regular students were generally quite pleased with the progress and success of distance education. One principal remarked that in his school the completion rate was about 65% in the first year, but would probably be closer to 90% by the end of the second year.

However, one principal warned that there would have to be modifications to the way distance education was organized and financed. He suggested that the jurisdiction could not continue to operate distance education in the schools on a low budget, and rely on the goodwill of teachers and administrators in the schools to support the program voluntarily. The principal commented that point one of a teacher and a half-time clerical assistant in each school was not a true indication of the cost of this program.

> That's all it's costing right now, because we've got a tremendous amount of teacher volunteer time, but that's not going to last; people are not willing to mark [distance education courses] as well as teach a full load. We've got a lot of people with full teaching assignments and they're marking as well, and we can't continue to do that. Either we have to pay them to do that extra marking, or we have to come up with additional personnel to do that marking.
>
> The deployment of our current staff and the amount of volunteering to do extra work [in this jurisdiction] is going to have to change, but we have some complicating factors: We have some small schools and they're being kept open, perhaps, only because of distance education. The staff at these schools feel that they have to make a contribution and they are doing the greatest amount of volunteering. That's not something I can agree with and even though it's not in my school I can empathize with the people down the road who are volunteering a fair amount of time.

The principal commented that while teachers had taken on the extra work during the implementation stages, they were reluctant to continue this arrangement indefinitely.

> I think it was an attempt or a desire to make this thing work, because there are a number of perceived benefits, both to the school and also to the students, so we've asked our teachers to make a commitment to distance education, to help get this thing rolling, and to show it can work. Now that it's working, one of the things that we will have to do is cut back on our demands of staff to volunteer their time. . . . We can't ask them to continue to volunteer, so the program will become more expensive. Right now it's not costing the County a lot of money.

The principal explained that the County was reluctant to pay a consortium to provide tutor-marker services, or pay its own teachers to be tutor-markers, but "I'm not prepared to give up all the things I've been doing [to continue] to be a volunteer, and I think a lot of other people are feeling the same way." The principal concluded that without more financial support from the County or government grants then the distance education program "just won't happen."

County of Leduc Arrangements

The County of Leduc's autonomous and centralized distance education service began in five of its schools only two months before this survey was conducted. While funds were available in the previous year, that time and finance had been used for planning and some experimentation with distance education arrangements and resources at the school level. The technology administrator explained that

> Last year we let the schools do as they pleased, some of them cooperated between themselves, but mostly the [distance education] material was used within classrooms, with split classes. So as far as what you might call distance education, in terms of distance, not very much was done.

During the initial planning stage in the first year and the brief implementation phase in the second year, this jurisdiction appeared to have made significant progress with the adaptation of distance education to its particular needs and educational environment. Interviews with the jurisdiction's educational technology administrator, one principal, and the itinerant distance education teacher, provided a unique description of the alloying of distance learning and technology, which was supported philosophically and financially by its governing board.

Jurisdictional Coördinator and Technology

According to the educational technology administrator who coordinated the distance education program in this jurisdiction,

> When it was decided we were going to get into distance education and a bunch of other technology-related things, I asked to be put in charge of it, because I could see it was going to be a problem in terms of technology.
>
> From my point of view, if we were going to do it--which was fine, because I think it's a great idea--it was just easier for me to be in charge of it. . . . My job is to make sure things work and are running smoothly. I look at it in terms of what money we need, where it needs to be spent, and what courses we should be offering.

The administrator also saw his role as adapting distance education to the jurisdiction's impressive array of educational technology in order to provide individualized instruction for students. The administrator emphasized the development of computers for improving communication and interactive instruction between the students and distance education teachers.

> I think technology invariably drives individualized instruction. I think that's where it has to go. . . . The thing that you often miss even with a good teacher is the individualized instruction, children working and learning at their own pace, and spending more time on a particular task.
>
> One concern the Board of education had was that the students would be locked into their computers and would not be dealing with people, [but] you don't see that happening. You see them asking each other questions, and you see the teacher constantly going around the room talking individually to students and helping them with a particular thing, as opposed to standing at the front of the class. So that's where I see technology going.

The administrator explained that in the previous year, "before we got into distance education" and as part of the planning for the next three years, parents were surveyed about the use of computers in the schools. Seventy percent of the parents in the jurisdiction responded and expressed strong support for more technology.

> They wanted their children to do more with computers and they wanted more computers in the schools. When we asked them did they think computers were helping the students to learn or do their work better, approximately 60% said yes, and then the others who said no, about half said no because their kids didn't get enough computer time. So there's phenomenal support; It's unbelievable support for technology. . . . Parents really believe that their children should be using technology in their education; they really believe it's important, for whatever reasons.
>
> In the survey we asked the parents, "How many of you are using computers in your jobs?" We found that about fifty percent were already using computers, and we're talking about a rural area. People may work in banks, or Safeway, or whatever where they're using computers, but it's there already; it's not in the future.
>
> I find it amusing when educators talk about "the future, and we'll be doing this and that." In the work place, in reality, people are already using computers. It's not really a big deal, and parents don't see it as a big deal that their kids should be using computers in the schools either.

Autonomy

The educational technology administrator explained that initially the jurisdiction had intended joining the West Central Alberta Distance Education Consortium. After attending several meetings the central office personnel were "all set to go,"

> Then there was an organizational meeting down in Red Deer, which all our principals went to as well, and basically the principals revolted; they did not want to belong this consortium, because they didn't see it as serving their own interests.

> There was a lot of emphasis on languages and things that they were not terribly concerned about. You have to remember that our small schools are not that small; all of them have at least a hundred students in the high school component, and probably average out at about 120, so they're not desperate.
>
> The principals also saw it as being an administrative nightmare. They didn't want to change their schools to fit into the consortium. Now that may or may not be reality, but that's the way they saw it.
>
> We looked at it and said, "If the principals don't want to be a part of the consortium, then there is no point in us being part of it, so we'll set up our own method of dealing with it."

The administrator commented that the jurisdiction eventually decided to organize its own distance education system. "We had enough schools to be big enough, but not too big and, because we were not part of a consortium, we could control our own destiny, and that was fairly attractive to everybody." A principal explained that,

> We felt that we could handle what we wanted to do on a limited scale at this point. The biggest concern was that we were going to leap before we looked. We wanted to be sure that we had something in place that we felt comfortable with, that would be successful, and we wouldn't have difficulties we hadn't anticipated.

Distance Education Models

According to the educational technology administrator, after rejecting the consortium concept there were a number of local meetings where principals were asked for their views about using distance education to overcome the deficiencies in their curricula. The administrator commented that,

> Initially we were looking at the model where teachers at one school would offer courses to students at another school. We started discussing this in terms of all those administrative sorts of things that principals are concerned about, and we couldn't get anybody to agree to cooperate.
>
> We couldn't even get our own principals to agree to cooperate, because in a sense they'd be giving up some of their decision-making powers, and they didn't want to do that. Again I'm talking about principals who were not desperate; they could see the advantages--"It would be really nice if we could do this"--but they weren't really interested in giving up too much.
>
> So then we thought about it a bit and thought, "Why not centralize the teacher? Then they don't belong to any school, they're not under any obligation to do anything else and they are providing a service to each of the schools," and that seemed to be the least troublesome way of dealing with it. The teacher would fit into each school somehow, so that's how we came to where we are now.

Multi-school model. A variation of the multi-school model was chosen as the predominant mode of distance education. At the time of this survey this unique operation had one "distance education teacher" centrally located at the County Centre to do the external tutor-marking. In a report to the County School Board, the technology administrator stated that,

> A distance education teacher is located at the County Centre and delivers courses using technology, supplemented by visits to each [school] site. All high school mathematics courses as well as Accounting 20, 30 and computer processing 20,30 are offered in this way.

The administrator expressed the view that the itinerant distance education teacher concept was better than the usual tutor-marker model used elsewhere. He commented that because of the regular visits there was a closer relationship and better understanding between the student and the itinerant distance education teacher.

> Because our teacher visits the schools, the relationship is between the student and the teacher, as opposed to the usual tutor-marker system where the relationship is between the student and the distance education facilitator or the fax machine and the student never deals directly with the tutor-marker.
>
> The students fax their materials to the distance education teacher, he talks to them on the phone, they use electronic mail, and he also has contact with them at least once a week at each of the schools where he sits down with the students, goes over their work, and talks about their problems.
>
> We call them distance education teachers to emphasize the teaching role, because we consider them teachers in our system who happen to be in a number of schools, so in some sense they're more like itinerant teachers.

The distance education teacher explained that he "worked out of the County office" and visited his 74 students in the five schools at least once each week. The teacher commented that, "I spend all day at this school because I have students pretty well all day, but I'm at at Thorsby for only four periods, and Warburg for two periods. So it depends on where my students are, and when they are available."

Officially there was only one distance education teacher, but at the time of the survey, at least two other students were doing courses which were being marked by teachers either in the same school or a neighboring school. A principal, who commented on the limited nature of the jurisdiction's distance education program, said, "we wanted to see how it would work with a limited number of courses before we went too deep." According to the technology administrator, because of the initial success of the program, the French coordinator would also be involved during the second semester as an itinerant distance education teacher. He also commented that "we're looking at the possibility of one more person next year, and we're looking at employing a maximum of four people in the future, if it works out." The administrator explained that the idea was to employ four distance education teachers, one in each of the core subject areas, as well as have the French coordinator tutor-mark some courses.

Multi-subject model. It was obvious in the previous case studies that using distance education materials in a regular classroom setting, for whatever reason, was a concern to some respondents. They seemed to believe that a multi-subject or a multi-course distance education class taught by a teacher who presents and marks the distance education material is not distance education, and may not be eligible for the provincial grant. Consequently respondents were often reluctant to talk about this matter. For example, to a question about split classes using distance education materials, a principal replied, "We have some of them, yes," and eventually explained that,

> We'll have a Social 30-33 class this year in the second semester, but it'll be made up of 22 Social 30 students, and seven social 33 students in the one class. So it'll be a combined class. If we had a humanities [distance education teacher], I'd pull those Social 33 students out and put them in the distance education suite, or leave them in there and have the distance education teacher responsible for their progress.

The technology administrator commented that the jurisdiction "got so much [funding from the grant] depending on how many students were using distance education materials, for whatever was defined as distance education." In response to a question about "split classes," or in other words multi-subject classes, the administrator replied, "We got the amount we applied for. Basically the definition of distance education changed about five times over the course of the year."

Computer based model--CAI-CML. To a question about how many models of distance education were being used in this jurisdiction the technology administrator declared,

> Actually, we have three, because we also have the computer program that we're working on for ACS [Alberta Correspondence School]. . . . It's CAI with CML components built into it. At present we're developing Mathematics 10, which we should finish in a couple of weeks, and we've also agreed to do Mathematics 20 and 30 within the year.

The technology administrator explained that his jurisdiction was not interested in buying the Digital Microvax and CML package mainly "because it's pretty dumb technology. . . . The machine itself is not bad; it's the idea that's bad." He commented that,

> Expense was not the real issue. . . [although] it's pretty expensive to do something that's pretty poor. . . . We looked at it, and decided that this was really dumb, because all you're doing is generating tests off a computer; it's no big deal. There's really nothing going on. Individual tests are nice, but that's not what we need.
>
> It's a very limited idea, and we saw ourselves being locked into that and not progressing any further. The other factor is that all our high schools have Macintosh computers and it didn't make a lot of sense to put in another machine; it made more sense to put more Macintoshes in there, but the big problem was how are you going to use it.
>
> We wanted to take the questions that were on the Microvax, transport them over to the Macintosh, and start from there and work it out. We wrote a letter to the Correspondence School and we were turned down. . . . In the meantime there were some changes with the management of distance education and then things started to fall into place.

The technology administrator explained that about five people were working on the project at the time of this survey. Two full-time mathematics teachers and an assistant were employed full-time, and a professor and a number of graduate students from the University of Alberta, were also working on the project on a part-time basis. The administrator commented that to develop the first course would probably cost the jurisdiction a substantial amount, "which for us is a scary sort of thing. . . . It's very expensive." The administrator indicated that the School Board was worried that "we are putting a lot of money into this [the CAI-CML project] and we're not seeing any return on it yet, so that's their concern, and it's a very legitimate concern." While some funds were provided by Alberta Correspondence School, the County of Leduc had also supported the project with the expectation that they would eventually be able to recoup their investment by the sale of the program to other jurisdictions. The administrator explained that the mathematics 10 course would be ready to be piloted by the next semester, and if successful would be sold through LRDC in September 1991. The other two courses were expected to be completed and available from the LRDC a year later.

The administrator commented that he was very grateful to the management of the Alberta Correspondence School for the opportunity, the funding and the freedom to develop the CAI-CML program.

> Talking to other people, obviously the ACS administrators are working with school personnel who have expertise in other areas. I think it's a good way to operate. The ACS administrators are giving everybody freedom to pursue what they can do best and then sharing the result with others throughout the province.
>
> It's really nice to see. ACS has been encouraging these things and putting in a little seed money, and I think it's really, really good, because not only are you encouraging people to develop things, but you're letting them go off in their own directions with some support. I think that's great because you learn from that.

Schools, Students, and Course Credits

Four of the jurisdiction's five schools involved with distance education were receiving the provincial distance education grant. Although one school with more than 150 senior students was ineligible for the grant, the School Board's policy was to treat their five schools equally in all matters, including distance education. The technology coordinator indicated that even without the grant the County's distance education-program would probably continue, but commented that losing the grant is a concern to the School Board.

> That's always the Board's concern. . . because the government has a history of setting up these programs, funding them for a few years, and then turning off the tap, but it's pretty hard to turn off a program once it's in place; people don't want to lose something they have. So the board's attitude is that right now they don't see the money being turned off, because distance education and supporting the rural

> community is a very political thing with rural voters. So the Board is not too worried about the grant being turned off.

According to the distance education teacher, he had a total of 74 students, from the five schools, in "Mathematics 13, 14, 23, 24, 33; Accounting 10, 20, 30; and Computer Processing 20." At the time of this survey the distance education teacher was tutor-marking a total of about 300 credits, which he acknowledged to be a comfortable workload and commented that, "it's not too bad, actually. I find it quite manageable."

Art 10 and English 33 were being taken by two students and tutor-marked as extra work by other teachers. Students were also taking about 75 distance education course credits in traditional classes with the class teacher presenting and marking the distance education material.

Altogether 400 distance education credits were being taken by students in the five high schools during the first semester. Respondents expressed the view that distance education was expected to increase significantly because of the initial success of the distance education program, and the introduction of French and the CAI-CML pilot program in Mathematics 10. A principal commented that,

> It's difficult to argue with success, and right now we're having success in what we're doing on a limited scale. I can see it increasing again in the humanities area; but under the same kind of format. There's a lot to be said for the teacher coming in one day a week, or even half a day, to touch base with the students.
>
> We'll probably have a 95% completion rate; there's only one student, who will not make it out of the 37 doing distance education in this school. . . . The first year I came here we had 75 students taking correspondence courses and only six of them completed the courses.

The technology administrator also remarked that adult education was expected to have an effect on the program in the near future. He commented that the School Board was "enthusiastic" about providing courses to adult students through distance education, although they were "a little leery" about the potential costs.

> Adult education is something we haven't done very well in the past. We've offered computer courses and all the glitzy sorts of things, but for a farm mother, who wants to finish grade 12 but can't come into school we haven't done a thing. So we're really looking at that now.

The administrator explained that although the school board was concerned about the costs, "because they can see it snowballing," distance education courses would be offered to adult students in the second semester. "We're not sure what will happen, but we're going to give it a try."

> We're cooperating with a place in the City of Leduc called the Community Education Centre, which serves Leduc and the surrounding area. . . . It's Continuing Education which is supported by the County and the City of Leduc. They bring in instructors from AVC or Grant MacEwan. We're going to start cooperating with these people and offering some mathematics courses and see what happens from there. Again it's just a start, but we'll probably learn something from that.

Reasons Given for Distance Education Use

Before distance education was implemented, correspondence courses were used extensively throughout this jurisdiction, but with very little success. In contrast to correspondence, its replacement, distance education was proving to be very successful. A principal suggested that distance education had other benefits as well. He commented that, "we're trying to enhance the learning opportunities for the students, and to increase the number of [course] choices for them." According to the technology administrator, even though the County's high schools average about 120 students, these schools have difficulty providing the range of subjects and levels of various subjects required by their high school diploma students.

> What tends to happen, you offer Mathematics 10 because its a matriculation course. Then the question is do you offer Mathematics 13 and 14. The schools usually offer Mathematics 13 or 14, but not both and they won't offer a split class. So some students don't get what they need. You could cycle it and offer Mathematics 13 one year and Mathematics 14 the following year, but a lot of the students get lost in the shuffle. . . . That was an area principals saw as being a problem in their schools; mathematics and the students getting lost in the shuffle.

Because the principals saw a major need for distance education with mathematics the County's initial focus has been in this area. In the first semester of the new distance education system, the County's five schools were able to provide all nine levels of mathematics. The administrator explained that the County's goal was to eventually employ distance education teachers in the four core areas to provide the various levels of the core courses.

> Right now we have somebody in the mathematics area, but our goal is to have somebody in language arts, the social sciences, and the pure sciences. If we could provide these various courses, that would free up our schools to do two things: One would be to do more fine arts, which we don't do very well in our small schools, because we can't devote a specialized teacher to them. The other thing would be more of the lower level courses such as Mathematics 14 could be done by the teachers in the schools, where they could give kids individual help, and the higher level courses such as Mathematics 10 could be done via distance education. So that's what we're looking at as a goal.

Facilities, Scheduling, and Supervision

Facilities and technology. In a report to the School Board the technology administrator outlined the impressive range of communication technology and facilities already in place or in the process of development in the County of Leduc's five small schools and central office.

> All high schools are equipped with Canon L920 fax machines.
>
> All high schools have at least 50 networked Macintosh computers for student use. Beaumont High has 140 computers. A software technician supports all networks, including the electronic mail network.
>
> Each school is part of an electronic mail network using Quickmail. Individual students will have ready access to this network to communicate with their distance education teacher.
>
> Distance education students will use programs to help them complete assignments. They may also use courses and test materials developed for the Macintosh computer.
>
> Four of the five schools have satellite dishes.
>
> A teleconferencing network for the delivery of French and possibly other languages will be set up next year if there is sufficient demand. When it becomes available video-conferencing will be explored.
>
> Distance education suites are planned for all our high schools. The first specifically designed for this purpose was built at Thorsby School this summer. Access to these facilities will be available for adult students from the local communities.
>
> A distance education area is in place at the County Centre at Nisku, and is designed to accommodate a number of teachers. All the distance education teachers will have computers and ready access to a fax machine.

Scheduling and supervision. Students taking distance education courses in the County's five schools are timetabled and supervised. The type of supervision varies, and in four of the schools the students do their distance education lessons at the back of regular classes, and in two cases "students are located in classrooms where a related course is going on." In the school where the students are not directly supervised, they are "located in a glassed-in area adjacent to the computer laboratory. The principal of this school commented that,

> We've got teachers who have visual access to those students from either side, so there is some informal supervision. Then there are other teachers who pop in from time to time to assist the student with particular problems. . . . Those students have a lot of independence really, as distance education is designed to be.

Coordination, Clerical Assistance, and Teacher Support

In the report to the School Board the technology administrator outlined his role with respect to the coordination of the distance education program, and also outlined the roles of the other key participants in the schools.

> The educational technology administrator, reporting to the deputy superintendent, is responsible for coordinating all activities related to distance education. Responsibilities include:
>
> 1. Consulting with principals.
> 2. Supervising distance education teacher(s).
> 3. Coordinating software development.
> 4. Coordinating evaluation activities.
> 5. Establishing the necessary budget.
> 6. Liaison with Alberta Education.

With respect to the centralized delivery of distance education in this jurisdiction, the technology administrator stated that,

> The distance education teacher will:
>
> 1. Work in a well-structured atmosphere with secretarial support.

2. Visit schools at least once a month as part of the tutoring process.
3. Maintain close ties with each distance education facilitator.
4. Be responsible to the Educational Technology Administrator.

The school distance education facilitator will:

1. Monitor all students enrolled in distance education courses.
2. Keep records of distance education lessons completed.
3. Maintain close contact with the distance education teacher.

The principal will:

1. Timetable the facilitator position to provide for duties involved.
2. Timetable the students as necessary.
3. Oversee all aspects of distance learning in his/her school.

The technology administrator explained that at this early stage of the program, the regular clerical assistants had taken on the small amount of clerical work connected with the distance education program, and in some cases had also taken on some of the responsibility for facilitating the program.

> Originally we had set up the duties of the facilitator and the principal as coordinator, but we found that in most of our schools, the school secretary has taken over most of these duties, because she has taken over most of the faxing and clerical types of things. She tends to be in charge of all the distribution of materials as well, so once the student is in place, the person he deals with most at the school is the secretary and the visiting distance education teacher.

However, there appeared to be an emphasis on supervision and support for the distance education students from teachers within the school and, in at least two of the jurisdiction's schools, the distance education students were timetabled into classes "where a related course was going on" In the other schools it also appeared that, although a formal teacher advisory system was not in place, support within the school was readily available.

Issues

According to the principal of the only school visited in this jurisdiction, the distance education program was progressing very well in his school and throughout the jurisdiction. He also commented that he was surprised with the acceptance and success of the program in his school at this early stage, and in particular was extremely pleased with the 95 % completion rate his students were expected to achieve with their distance education courses. "I wouldn't say at this this time there are any major problems. I'd say a minor problem would be that we could use a little more monitoring of students at our end." He also made a general comment that,

> The jurisdiction has been tremendously supportive through the [technology administrator], and at the school level with the distance education teacher coming in, the hardware, the allocation of the dollars from the distance education grants, providing the necessary materials, encouraging us to get other students involved in distance education if it fits their program. They've been really supportive.

The technology administrator also expressed the view that although the distance education program was at an early stage, generally it was developing very well, and anticipated it would grow significantly in the near future. However, he did comment on a problem with the reading ability and inappropriate placement of students in the distance education program.

> Placing students in the program who can't read properly is a big problem. Some student who were placed in courses were not capable of reading at the required level. By capable, I don't mean they haven't been taught, but capable of the reading level presumed necessary for the distance education material. That problem has settled down, and teachers now understand that one doesn't put those students in distance education, because it depends so much on reading.

The technology administrator also suggested that there was a problem with the distance education technology now in use, and the concept of how existing technology should be used.

> I hate the fax machine. I think it's a very clunky technology, because it's slow, it's cumbersome, and if there's no paper at the other end you've got to redo it. Right now the fax is at the pinnacle of technology in some sense, but that's because we don't have paperless offices yet; everybody deals with paper. Once everybody has one of these computers on their desk, the fax machine is dead.

Chapter Summary

This chapter included two case studies of the arrangements two autonomous jurisdictions have made to provide distance education for their senior students in small schools. The descriptions were based on data from interviews of key participants in each of the two jurisdictions.

The respondents described two independent and innovative jurisdictions which were large enough, with five or six schools, to implement their own distance education cooperatives. While both jurisdictions demonstrated a keen interest in distance education to expand and enhance the curricula of their small schools, they also clearly demonstrated the connection between distance education and technology. In both jurisdictions distance education and its technology were obviously having a profound effect on the delivery of education, but these innovations were also beginning to have an effect on the physical and organizational structure of the local schools. In both jurisdictions the provision or rebuilding of distance education rooms, or suites, incorporating a range of technology was seen to be important. The redeployment or employment of teachers in new teaching roles was also a significant aspect of these case studies. But, probably the most significant aspect of both of these studies was the industry and creativity demonstrated by two organizations and their members who had been provided with the opportunity to develop and implement their own distance education technology and arrangements.

Chapter 9

REVIEW OF STUDY FINDINGS

An overview of the design and conduct of the research is followed by a summary of the findings and suggestions for further research.

Review of the Study

Objectives

This research consisted of a series of five case studies of the distance education arrangements which schools and school systems have implemented to meet the needs of senior students in small schools. The objectives of the study were to describe a broad range of distance education arrangements, identify critical issues, and examine the implications of the arrangements for students, school personnel, schools, and school systems. Three distance education consortia and two autonomous jurisdictions were selected for the case studies, and the following questions guided the research:

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

2. What are the critical issues concerned with these organizational arrangements?

Research Design and Methodology

The study was based on the assumption that there are multiple realities, and understanding of those realities was sought from significant participants familiar with the organization of distance education in the surveyed schools and jurisdictions. The five naturalistic case studies were conducted in the actual settings, and data were derived from conversational responses to questions, casual observations, and extant documents.

Conduct of the Research

From an initial telephone survey of Alberta educators, two consortia and two autonomous jurisdictions were chosen for the case studies, a series of semi-structured interview schedules was developed, and the researcher was invited to attend a conference at Alberta Correspondence School at Barrhead, on September 18, 1990. At this conference the researcher was able to meet many of the key people involved with the organization of distance education throughout Alberta, and make tentative arrangements to visit and survey distance education in the jurisdictions which had already been selected. The conference also provided the opportunity to add the West Central Distance Education Consortium (WCADEC) to the case study list, because of the unique characteristics of its management and organization.

The five case studies provided the opportunity to compare consortia with autonomous jurisdictions, and at the same time examine and compare the peculiarities of each organization. As a result of the initial enquiries, each of these organizations was known to have different histories, different organizational arrangements, and potential with respect to the objectives of this study to document a wide range of organizational arrangements.

The researcher received permission to visit and interview participants in 14 jurisdictions. The survey was conducted at the end of October and throughout November over a five-week period. The researcher traveled over 5000 kilometers to visit 14 jurisdictions and 30 schools to conduct a total of 53 interviews, collect local documentation, and observe relevant phenomena in schools and jurisdictional offices throughout the rural areas of central Alberta.

All formal interviews were audio-taped and later transcribed. All informants were asked to verify the transcription of their interview and where necessary enlarge, or amend the content, and return the signed transcript to the researcher. The researcher obtained relevant documentation where possible, and also attended three meetings and made notes about observations and reflections. Much of this information was later followed up and verified by telephone during the analysis of the data and the writing of the findings.

Summary of the Findings: First Question

1. What organizational arrangements are being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

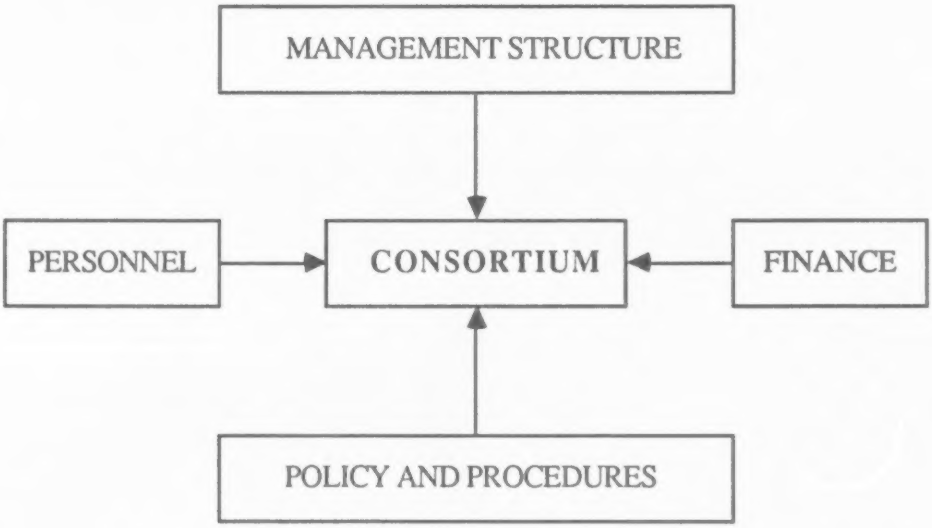
The jurisdictional arrangements and the school arrangements are described separately.

Jurisdictional Arrangements

Information about the jurisdictional arrangements was analyzed to identify the major components shown in Figure 9. These components, management structure, policy and procedures, finance, and personnel provide a framework for the following summaries of the unique aspects of each organization.

Figure 9

Major Components of Consortium



In the case studies of the two autonomous jurisdictions, respondents indicated that there was no need for a new management structure. In both cases the jurisdiction's existing organizational structures were adapted to provide the personnel, financial support, and direction for the distance education cooperative ventures among local schools.

Case Study #1: CEDEC

The Central East Distance Education Consortium (CEDEC) was just beginning its second year of coordinating distance education in 17 schools in six jurisdictions at the time of this survey. The consortium was formed by the six jurisdictions as a means to provide a service which, according to the consortium handbook, "in no way should impede or restrict the autonomous operations of member jurisdictions." Such a premise seemed to conflict with the cooperative nature, and shared decision-making, of a distance education consortium.

The consortium was governed by a Management Committee and supported by a Coordinating Committee. The Management Committee consisted of a superintendent and a board member from each jurisdiction. This committee was required to meet once each year to review policy and budgets, and appoint a consortium coordinator. The Coordinating Committee consisted of a jurisdictional coordinator from each of the six jurisdictions and the consortium coordinator, and met as often as it was necessary to make decisions about the operation of the consortium. In deference to the autonomy of the jurisdictions, the main task of members of the Coordinating Committee was to represent the interests of their own jurisdictions by verifying the day-to-day decisions affecting the consortium's operation of distance education. It appeared to be a cumbersome organizational process that provided little opportunity for the consortium coordinator to demonstrate leadership and make decisions on behalf of the consortium. The consortium coordinator's limited authority and power was matched by the small amount of time allocated to the position. He was officially employed only quarter time.

Although CEDEC was in the early stages of implementation and understandably in a state of flux, respondents indicated that there was a lack of attention to detail, and that the consortium management structure, consortium agreement, operational policy and procedures were either inadequate or inappropriate for this type of organization at this stage of its development. As one respondent suggested, a full-time coordinator supported by an agent board with the power and flexibility to make decisions and act on them quickly would have been more appropriate during this implementation stage. Apparently this management concept had been rejected because of the jurisdictions' desire to protect their independence and autonomy.

The distance education course fees of $110 per credit, and the principle of balancing the number of credits bought and sold by each jurisdiction were the sources of other problems. These fees were almost double what the other two consortia were charging their jurisdictional members. CEDEC's business of buying and selling distance education course credits was based on an informal principle that each jurisdiction would supply tutor-marker services in one subject area, and that the services provided would be about the same, or balance with the number of distance education credits taken by the students in that jurisdiction. Unfortunately, such an important aspect of this operation was not included in the Consortium Agreement or the Policy handbook, and the application of this principle depended on each jurisdiction's interpretation and willingness to cooperate to make it work. Compounded with the $110 fee structure, such a situation had the potential for causing problems. While each jurisdiction had the option of providing their share of the tutor-marker services, the smaller jurisdictions were not always in a position to do so. Consequently the larger jurisdictions could make large profits at the expense of the smaller jurisdictions.

Apart from one jurisdiction which was taking care of most of its own distance education requirements, there were 14 teachers providing tutor-marker services throughout the consortium. Demographically they varied greatly and included a range of people from first year teachers to retired teachers. Some were part-time, and some were full time; some worked in their homes, and others worked in schools.

Because each jurisdiction was responsible for the employment and working conditions of their tutor-markers, there was no consistency with these conditions and no opportunity for the consortium management to address some of the unfair practices that appeared to exist. The tutor-marker's full-time-equivalent (FTE) workload suggested by the consortium was 500 credits for the year. The actual FTE credit loads for tutor-markers was closer to 1000 credits per year throughout the consortium.

Usually the in-school tutor-markers were also expected to be full-time supervisors and/or coordinators for the distance education programs during the same time allocated for tutor-marking. Often administrators did not see tutor-marking as work which required a teacher's full attention, and in effect some tutor-markers appeared to be doing two jobs at the same time, such as supervision of students in a distance education room and marking lessons.

Problems such as these will probably remain while the consortium persists with a management process based on the protection of the autonomy of members, and depends on a coordinator with insufficient time and power to influence its operation during this crucial implementation stage. Several respondents suggested that although the distance education consortium was "in its infancy" it had the potential for "massive growth" but they recognized that effective, and possibly full-time, management was crucial to its future. A principal commented that "it's a matter of getting it flowing smoothly, developing appropriate policies and long-range planning, and deciding where we want to be in five or ten years."

Case Study #2: Big Sky

Officially the Big Sky consortium had been operating for only two months at the time of this survey, but most of its jurisdictional members were actually beginning their fourth year of distance education. This consortium had evolved from the provincially sponsored Distance Learning in Small Schools pilot project which had operated for the previous three years. Consequently, the consortium was managed by people with considerable distance education experience, and the majority of the consortium's 10 jurisdictions and 22 schools had well established distance education arrangements.

The Big Sky Consortium management structure also reflected the centralized control of the earlier pilot project, and although the consortium had only recently been formed, its management lacked the unsettled nature and conflict found with the CEDEC operation described above. Big Sky's policy, financial, and operational arrangements were directed by an agent board, and a half-time consortium coordinator with the authority and support to make decisions. In contrast to the CEDEC arrangements, Big Sky's management appeared to be operating smoothly and have the unanimous acceptance and support of participants, who did not seem to be worried about their jurisdictions' autonomy.

The Big Sky Consortium had three levels of government; the Trustee Committee, the Management Committee, and the Executive Committee, but the daily operation of the consortium was directed and managed by an agent board and a consortium coordinator. The Trustee Committee consisted of a school board representative from each of the member jurisdictions, met at least once each year, and was responsible for developing policy for the operation of the consortium and providing direction to the Management Committee. The Management Committee consisted of a superintendent from each jurisdiction plus the consortium coordinator. This committee was responsible for reviewing recommended policies and decisions made by the consortium coordinator and the agent board. The Chairman and two other members of the Management Committee plus the consortium coordinator made up the Executive Committee and the third level of management. This committee was responsible for implementing policy, but actually acted as advisors to the executive officer (the consortium coordinator) who was responsible for the day-to-day operation of the consortium. As well as providing financial services and maintaining consortium equipment, the agent board was responsible for supervising, accommodating and providing the salary and secretarial support for the coordinator.

The governance and management details were clearly stated in the Consortium Agreement, and apart from omitting important details about the tutor-marker's work and working conditions, the agreement could otherwise be considered a concise and comprehensive model document. As well as providing the basic policy for the consortium, the agreement dealt with the government of the consortium, the membership arrangements, and comprehensively described the consortium's financial principles and policy.

In the agreement it was declared that "the consortium shall be financed on a cost recovery premise based on course credits delivered and received." At the beginning of each school year jurisdictions were expected to pay $1000 for each of their participating schools for the initial "start-up" costs of operating the consortium through the agent board, but these funds were to be returned to the jurisdictions as credits to offset their costs at the end of the school year. The distance education course fee was set at $65 per credit, which was sufficient to cover the consortium's costs if students took an anticipated 3600 credits during the year. However, half way through the first semester the consortium coordinator estimated that during the year students would take about 5,600 credits which was almost double the enrolment initially anticipated by the consortium's administrators.

The actual cost of tutor-markers' salaries and benefits was to be paid by the consortium to the employing jurisdictions. So, instead of returning a set amount to a jurisdiction for each distance education course credit delivered, the consortium paid a jurisdiction the cost of employing a tutor-marker. This system allowed the consortium to make a profit, if there was one to be made, and in some way return the surplus funds to the consortium's jurisdictional members. This system also allowed the consortium to oversee the employment conditions of tutor-markers.

The consortium agreement specifically outlined the consortium's centralized control of the buying and selling of course credits, the tutor-marker services, and the tutor-markers' employment and working conditions. While the consortium decided which tutor-markers should be employed, and paid all the costs associated with their employment, the jurisdictions were responsible for hiring the tutor-markers and for their supervision, evaluation, salaries, and benefits. There was no need for jurisdictions to employ a quota of tutor-markers because the consortium was responsible for the selection of the tutor-markers and organized their employment with a local jurisdiction.

Obviously the consortium's organizational arrangements had been influenced by the pilot project which operated for three years before the consortium was formed. A superintendent whose jurisdiction had been involved with distance education since the start of the pilot studies in 1987, remarked that most of the problems had been dealt with during those earlier years and that, "in terms of seeing the distance education program operate over several years, there hasn't been any issue or problem that seems to be reappearing and that needs to be dealt with on a regular and routine basis."

Although most respondents expressed a similar view, there were three issues which had evolved with this new organization. The first concerned the geographical size of the consortium. The Big Sky consortium covers an area of about 65,000 square kilometers, more than four times the size of the CEDEC consortium's area. Because the 10 jurisdictions and 22 schools were spread over such a large area, coordination was difficult and survival of such a large organization was unlikely.

The half-time consortium coordinator expressed concern about the amount of work involved with coordination, which he believed should be a full-time position. Apart from the consortium's large area, the coordinator's workload had increased because of the unexpected demand for course credits which were almost double the anticipated estimates.

The third issue concerned the work of tutor-markers. It appeared that the FTE tutor-marker's workload of 500 credits per semester was excessive and allowed little or no time for tutoring students. While the tutor-markers' duties, responsibilities, authority, workload, and training were essential to the consortium's operation, there was no reference to them in the Consortium Agreement.

Case Study #3: WCADEC

The West Central Alberta Distance Education Consortium (WCADEC) has provided distance education in 13 schools in nine jurisdictions since the start of the 1989-90 school year. Similar to CEDEC none of the schools in this consortium had been part of the initial distance education pilot studies. In most other respects this consortium was found to be significantly different to CEDEC. The management structure, and tutor-marker arrangements were different; greater emphasis was placed on policy and operational procedures, and jurisdictional cooperation and autonomy appeared to pose no problems. The most significant differences were the employment of a full time consortium coordinator--designated the consortium director--and the employment of regular classroom teachers as tutor-markers.

The director explained that "we adopted the philosophy that the organization of the consortium was more important than the technology, and that we would set up the organization then apply the technology." The director commented that

> Where they have external tutor-markers, we use our teachers in the schools. We think that some of the money coming into distance education should be used to maintain a good staffing ratio in the schools, then by rationalizing your program you can release individual teachers in those schools to accommodate students from other schools.
>
> Also I think it's important to have teachers in the schools, because teachers are more than just markers. Instead of someone sitting out there on the farm, tutor-marking and faxing stuff backwards and forwards to fifty students, why aren't they in the school being paid in the regular way and taking part in all the school-sponsored activities?

The director commented that apart from the "one [external] tutor-marker. . . there must be 70 or 80 teachers in the schools" who teach distance education courses. Using this model of sharing teacher expertise, about 2000 course credits were expected to be exchanged between the consortium's schools during the 1990-91 school year.

Similar to CEDEC, each school had the opportunity to balance the number of distance education course credits "received" with the credits "delivered" to other schools. According to the director it depends on the school whether they wish to balance their distance education costs with their income from tutor-marker services. Some schools "have opted not to deliver a lot [of credits]. . . . They're prepared to pay for the external tutor-marking rather than hire additional staff."

Similar to the Big Sky Consortium, the Consortium Agreement in this case had considerable merit, but failed to deal with some of the essential elements concerned with the management and operation of the consortium. For example, the agreement does not adequately explain the business of the consortium and the central concept of balancing the "receiving" and "delivering" of distance education course credits, and no reference was made to the teacher-tutor-marker concept and role.

The agreement's main purpose was to describe the "management structure of the consortium," which consisted of two levels of government referred to as the Board of Governors, and the Management Committee. The Board of Governors was expected to establish policy governing all matters relating to the effective and efficient delivery of distance education. The Consortium Agreement's general, but inadequate, prescription of the Management Committee's responsibilities are stated as follows:

> The Management Committee shall do all such things as are reasonably required to be done by the Minister [and] by each of the parties hereto in respect of distance education and shall do so on behalf of the parties hereto.

An Agent Board was expected to look after the legal and financial operation of the consortium, provide the services of a Secretary/Treasurer, and act in accordance with the directions of the Management Committee and in accordance with the policy decisions of the the Board of Governors.

The day-to-day operation of the consortium was managed by the consortium director and supported by the Agent Board. Although the director's role and responsibilities were extremely important in the operation of the consortium, this position was not explained adequately in the Consortium Agreement, nor was this role mentioned in the Consortium Handbook which provided a role statement for all other individual roles involved with the consortium's delivery of distance education.

The director explained that the most important part of his role was developing cooperation with the principals during the implementation phase: "I think probably one of the successes of this particular consortium is that we've established some very good working relationships between myself and the principals, and I'm not sitting out there on my own; we're working together."

Unlike the consortium coordinators in the previous case studies, the WCADEC director was employed full-time and given a three year contract to establish the operation of the consortium. This situation was even more exceptional given that this consortium was much smaller than the other two consortia, and in terms of course credits was about a third of their size. The director expressed the view that coordinating the consortium should be a full-time position, and commented that in the other consortia "they need more than a part-time position to do this."

The consortium's financial arrangements concerned three aspects. First, the Agent Board managed the consortium's finances, and in particular managed the balance of funds for the course credit exchange between schools. Second, each school contributed $6000 to be a member of the consortium. The third aspect concerned the course fees. Each school paid $60 per distance education course credit "received" from other schools, and received $60 per credit for tutor-marker services "delivered" to other schools.

Because the tutor-marking was carried out by teachers regularly employed in the consortium schools, the matter of their payment, and related working conditions, was not an issue in this consortium.

Apart from the inadequacies of the consortium agreement identified above, the only other problem with the consortium management was raised by the consortium director. He suggested that now that the basic organization had been established, consortium costs could possibly be reduced by reducing his own employment to a part-time position. However, a superintendent argued strongly that the consortium director's role should not "diminish" and become a part-time position. The superintendent expressed the view that during the director's three year tenure tremendous changes and challenges would have to be met and that "the job will undergo some transition and change," but that the position would be just as demanding in the future.

Case Study #4: County of Camrose

Five schools in the County of Camrose have very small high school components, with an average of about 60 senior students in each school. With 35 senior students, one school has been able to kept its high school diploma program only because of its involvement with distance education.

This jurisdiction decided not to join one of the larger consortia, but to organize its own distance education system. The deputy superintendent who investigated the options commented that the consortium concept appeared to be "too ephemeral" and "too expensive," and explained that, "I've got to be fairly concrete," and "purchasing courses was going to be very, very expensive, and I realized we couldn't afford it." However, being autonomous also appealed to the local participants. A principal commented that its "the only way to go as far as I'm concerned." The deputy superintendent also explained that with the expertise that was available even in six small schools, and five of these schools receiving the distance education grant, it was feasible for the jurisdiction to provide its own distance education services. "The money that we collect is our own. If we make it work, fine; if we don't make it work then we'll fail because of our own mistakes."

While the existing staff provided most of the extra time required for tutor-marking, point one of a teacher's time and a half-time clerical assistant have been added to each school's staffing entitlement to coordinate and facilitate the distance education arrangements, and maintain and monitor a 48 hour turnaround time of students' lessons.

Except for providing course credits to a small number of students at the School for the Deaf, the jurisdiction's distance education operation was confined within its own boundaries. Consequently a partnership agreement and the establishment of membership fees and course fees to support an external tutor-marker and administration infrastructure were not important facets of this operation.

Case Study #5: County of Leduc

The County of Leduc's autonomous and centralized distance education service, to its five schools with a high school component, had been in operation for only two months before this survey was conducted. The previous year was spent planning and experimenting with distance education arrangements and resources at the school level.

According to the technology administrator who coordinated distance education in the County, initially the jurisdiction had intentions of joining the West Central Alberta Distance Education Consortium. At the time the central office personnel were "all set to go. . . the principals revolted; they did not want to belong this consortium, because they didn't see it as serving their interests." The administrator commented that

> There was a lot of emphasis on languages and things that the principals were not terribly concerned about. You have to remember that our small schools are not that small; all of them have at least a hundred students in the high school component, and probably average out at about 120, so they're not desperate.
>
> The principals also saw it as being an administrative nightmare. They didn't want to change their schools to fit into the consortium. Now that may or may not be reality, but that's the way they saw it.

According to the administrator the jurisdiction eventually decided to organize its own distance education system because "we had enough schools to be big enough, but not too big and, and because we were not part of a consortium, we could control our own destiny, and that was fairly attractive to everybody."

After only two months of local cooperation this jurisdiction appeared to have made significant progress in the adaptation of distance education to its particular needs and educational environment. This progress had obviously been influenced by the technology administrator who was intent on adapting distance education to the jurisdiction's impressive array of educational technology in order to provide individualized instruction for students. This emphasis on technology was a contrast to the philosophy outlined by the WCADEC director who stated that, "the organization of the consortium was more important than the technology, and that we would set up the organization then apply the technology."

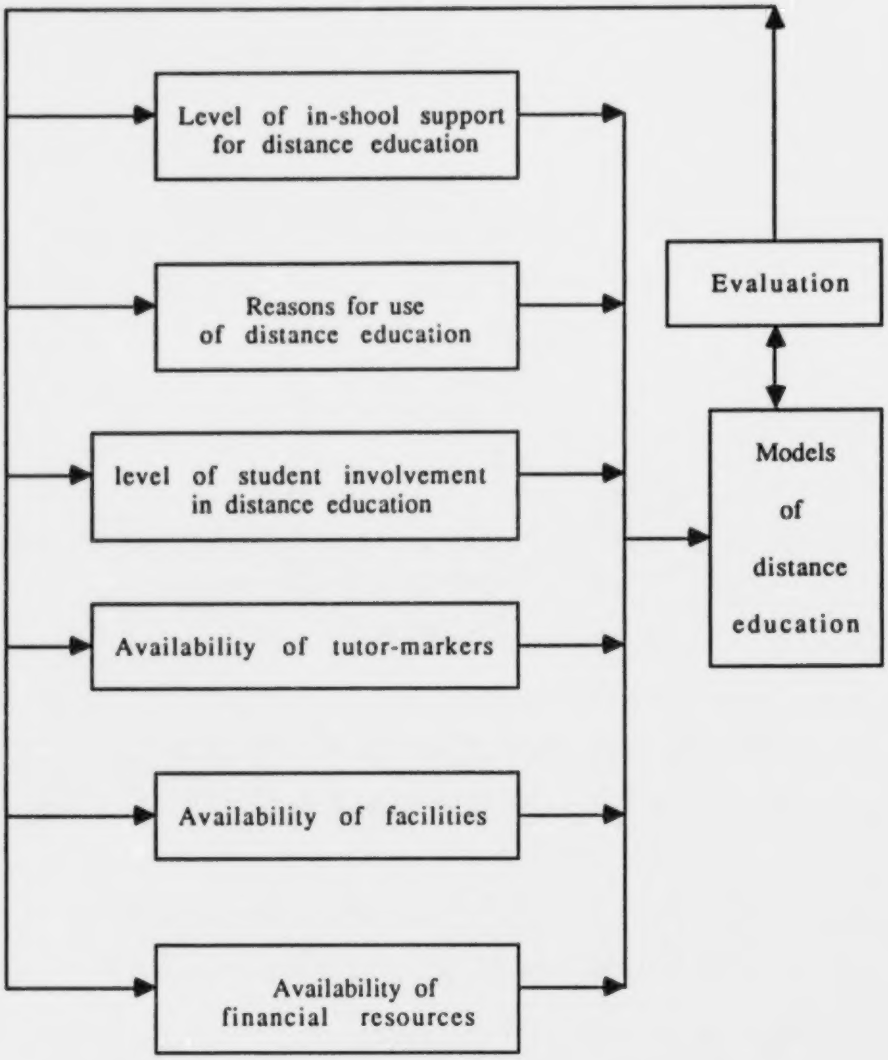
The County of Leduc's technology administrator emphasized that "technology invariably drives individualized instruction. I think that's where it has to go. . . . The thing that you often miss even with a good teacher is the individualized instruction, children working and learning at their own pace, and spending more time on a particular task." The administrator explained that parents in particular seemed to be in favor of this approach, and stated that in a recent survey about the use of computers in the jurisdiction's schools, 70% of the parents responded and expressed strong support for more technology.

School Arrangements

Analysis of information about the distance education arrangements at the school level indicated that there are six major factors involved in the evaluation and selection of the model or models of distance education implemented in each school. The six factors, which are shown in Figure 10, include the level of in-school support, reasons for using distance education, level of student involvement, and the availability of teacher/tutor-markers, facilities, and financial resources. These factors provide the framework for the descriptions of the school arrangements which follow Figure 10. The school arrangements within each consortium and within each autonomous jurisdiction are dealt with separately.

Figure 10

Factors Involved in the Selection of Models of Distance Education


Level of in-shool support for distance education
Reasons for use of distance education
level of student involvement in distance education
Availability of tutor-markers
Availability of facilities
Availability of financial resources
Evaluation
Models of distance education

Case Study #1: CEDEC

The loose organizational structure of CEDEC, and the consortium's policy of deferring to the autonomy of members seemed to allow a large amount of organizational creativity at the jurisdictional and school levels. It was also possible that the variety of arrangements that existed throughout the consortium's schools reflected the trial and error nature of this innovation and should have been expected at such an early stage of implementation.

Variations of the "Computer-Based (CML) Model" were widely used and were readily accepted by school staff for multi-level mathematics classes because of the similarity to traditional instruction.

While the "Multi-School Model" was less acceptable to teachers than the previous model, it was used extensively by the schools in the consortium and was the main reason for the consortium's existence. A total of 4959 distance education course credits were provided with this model to the consortium's seventeen schools during the 1990-91 school year. Generally the organization of this model consisted of senior students in different subjects, grades, and course levels grouped together in discrete classes, timetabled, and supervised by a teacher. These students were able to interact with their external tutor-markers via telephone or telefacsimile machines.

There were six reasons given by respondents for implementing distance education into the nine schools surveyed. Expanding the curriculum by adding more subjects, enhancing the curriculum by providing more levels and more opportunities to do the core subjects at different times, and satisfying the individual needs of the high school diploma students were the reasons given more often than any others. Providing independent or personalized learning opportunities was considered important in four schools, and providing curriculum enrichment by offering interest courses or higher level courses which were not required for the high school diploma, was important in only two schools. However, accessing distance education funds provided by the province was important in five of the nine schools visited in this consortium.

The effective implementation of distance education in most of the schools surveyed appeared to rely on the enthusiasm of key people such as the school coordinators, and the cooperation and support of clerical assistants, and teacher advisors. Most of the people in these positions willingly accepted the extra duties without reward in order to make distance education a viable alternative in their schools.

While one principal and two vice-principals had assumed the coordinator's role, in the other six schools five teachers and one teacher-assistant performed the coordinator's duties. Part-time clerical assistance was provided in four schools, and a voluntary teacher advisory system had been organized in five of the nine schools.

Irrespective of the unsettled nature of this consortium at the management and jurisdictional level, distance education at the school level appeared to have made remarkable progress during this implementation stage. Accurate information about completion rates of distance education courses in each jurisdiction were not available, but from respondents' estimates the completion rate appeared to be between 50% and 75% for the first year. Although most respondents were not satisfied with this level of success they realized that this was at least two or three times the completion rate expected of the correspondence mode which was used extensively in the consortium's small schools before distance education was implemented.

Case Study #2: Big Sky

Of the 22 schools in the Big Sky consortium, 20 had one to three years' involvement with the distance education pilot project before the consortium began in September, 1990. Eight of the 10 schools surveyed had joined the pilot project at some stage during its three years of development. The two schools new to distance education also benefitted from a feasibility study which was based on the expertise and knowledge gained from the pilot project.

In the 10 schools surveyed, the "Multi-School" model had almost completely replaced the correspondence program which had been used extensively in many of the consortium's schools before the distance education pilot project began in 1987. However, two schools still had a very small number of students taking courses through the Alberta

Distance Learning Centre. The "Computer-Based (CML)" model had not been implemented in any of the consortium's schools partly because of the costs involved and because of the expectation that a better and cheaper system would be available in the near future.

The reasons given for implementing distance education in the ten schools surveyed demonstrated a polarization of opinion that was not evident in the CEDEC survey. In nine of the ten surveyed schools, curriculum expansion was given as the main reason, and satisfying individual student needs was given in six schools. While providing personalized learning and curriculum enhancement were important in only one and two schools respectively, accessing distance education funds was less popular in schools in this consortium than it was in CEDEC, with respondents indicating that only three schools were involved with distance education to access provincial funds.

The distance education school arrangements varied to some extent from school to school, but generally each school had well established and successful programs, with an emphasis on supervision. Respondents in most schools quoted completion rates in the eighty and ninety percent range, and proudly related stories about the success of their distance education program. The reasons given for this success varied, but appropriate learning facilities and adequate supervision were given priority by most respondents. All but one of the 10 surveyed schools had a dedicated distance education room. Seven had direct supervision, and the other three had only a very small number of selected students receiving indirect supervision and assistance on request. Most of the dedicated distance education rooms were very comfortable and well equipped learning environments, which according to several respondents had a very good effect on student learning. Some schools charged their students as much as $50 per credit, but in most cases refunded this "deposit" when they completed or passed the course. Some respondents suggested that their students succeeded because they "pushed" them and "by being nasty." However, while the self-disciplined students must take credit for their own successes, many students undoubtedly benefited from the enthusiasm, commitment, and the day-to-day encouragement of concerned and interested teachers and teachers' aides who supervised them. Apart from the organized teacher advisory system which existed in four of the schools, generally teachers were willing to provide extra tuition for the distance education students.

One aspect common to all the schools visited in this consortium was that distance education had replaced the correspondence mode with outstanding success. Respondents reported that while the correspondence model had been used extensively in all these schools before distance education was implemented, the completion rates were reported to be as low as 20 to 30%. In contrast, the distance education completion rates were reported to be about 90% and as high as 98%.

The issues and problems concerned with the arrangements of distance education were similar in the ten surveyed schools. While most respondents complained about the supply of distance education material from LRDC, some of them expressed the view that the situation had improved significantly this year. Other problems included the scheduling of student time, attendance, completion of assignments, acquiring the communication facilities, and using this new technology.

Case Study #3: WCADEC.

At the time of this survey WCADEC was just beginning its second year of distance education with 13 schools in nine jurisdictions. Information provided in the survey of seven schools in five of these jurisdictions indicated that generally the school arrangements were similar throughout the consortium.

Two basic models of distance education dominated the arrangements. The multi-school model was similar to that used in the other consortia except that, as a rule, the tutor-markers were employed in the consortium's schools. Altogether "70 to 80" tutor-markers were spread throughout the consortium's schools. Each of these school based teachers tutor-marked no more than 50 distance education course credits, and as little as three credits. During the 1990-91 school year students were expected to register in a total of 2000 externally marked credits, which was only a third of the number of credits processed by each of the other two surveyed consortia.

The multi-subject model was used extensively throughout this consortium to accommodate multi-subject or multi-level classes within the schools. These classes used distance education material which was marked by the regular classroom teacher. This was an innovation that had not been used widely in the other consortia, but had been so successfully adapted in this case that more credits were provided by this mode than with the usual multi-school model. The consortium director predicted that during the 1990-91 school year students in the consortium's schools would take 2500 course credits this way.

While the reasons for using distance education centred on curriculum expansion, enhancement, and individual student needs, there was an underlying theme that the curriculum had been enriched considerably by the addition of Japanese and Spanish languages, and agricultural courses supplied by Olds College. It was also noticeable that there was an obvious lack of interest in personalized learning and accessing distance education funds in these schools.

Respondents estimated that the completion rate during the first year was below 75%, and was not as high as participants would have liked, but once again distance education was found to be far superior to the correspondence model. By the start of the second year most participants had implemented strategies to increase the success rate, and were more aware of the importance of a distance education room, scheduled classes, and teacher supervision. In six of the seven schools surveyed direct supervision and extra teacher assistance was provided, and in the seventh school the distance education students were expected to sit at the back of a regular class.

While only two schools provided extra clerical assistance, all but one school had a large number of teacher-tutor-markers, and most had teachers appointed as distance education representatives to coordinate the faxing, filing, and reporting by the teacher-tutor-markers in the schools.

Respondents expressed the view that they expected the organization of distance education to continue to change and improve in their schools. The consortium director remarked that the worst problem was "an inability to get material on time." An assistant principal commented that, "we've had a positive response from the parents until the time comes when the student hasn't done the work. . . or the materials haven't arrived."

Although the supply of some distance education material had been an issue in the previous case studies, to a large extent the problem had been overcome by pre-registration of students and ordering of materials as early as June. That is, three months before the start of the next school year. There were also instances of schools, jurisdictions, and consortium stockpiling of materials in case they were not readily available from the supplier at the beginning of the school year.

The consortium director commented that another problem was "the turnaround time, and putting in place an infrastructure everyone will follow." Apparently teachers were taking longer than the 48-hour turnaround time for lessons, and "in some cases the credibility of the system was considerably damaged by such delays." Students were also at fault for not keeping to their time lines, and had caused considerable problems for the tutor-markers with late submissions. The director reported that "there were several instances where a teacher received up to 10 lessons on the 20th of June or later."

The consortium director described another problem as follows:

> Schools need to abandon the old concept of correspondence courses and switch their thinking towards the concept of distance education. This was not easy because high school principals were used to signing a correspondence form for students who would then receive the course from Alberta Correspondence School and proceed through the work with very little effort or supervision on the part of the school.

This attitude was evident in the comments of several respondents who acknowledged that in the first year in particular there had been "very little effort or supervision on the part of the school." In his annual report the director reminded consortium members that the success of their organization would depend on the successful completion of distance education courses and that schools must assume more responsibility for regular monitoring and daily supervision of their distance education students. The director stressed that he needed more inservice opportunities to promote the concept of distance education among the school principals. He stated that

> It was critical and obvious that the principals would play a major role in this whole project and that it could be successful if the principals cooperated with the consortium director, with each other, had a major role to play in the organization and were convinced that the total program would be of benefit to their schools.

The annual report also contained a comprehensive summary of the possibilities and problems with technology in the delivery of distance education courses in the consortium. Although there was a range of technology available and a great deal of time was spent exploring its "viability and usefulness," the director concluded that "the main work-horse of the system will [continue to] be the fax machine and its use will continue to grow." The director concluded that it would be "a long time before the [computer] system assumes a major role in the delivery of courses, and I recommend that we do not invest any further money in this particular technology."

Case Study #4: County of Camrose

In the first semester of the 1990-91 school year, students in the five County of Camrose schools with a high school component were taking 1,241 distance education credits in a total of 178 courses. That is, each school with an average of 60 students was taking a total of about 240 credits and 35 courses, which indicated a moderate to high involvement in distance education. One principal remarked that in his school the completion rate was about 65% in the first year. He predicted that the result would probably be closer to 90% by the end of the second year because teachers and students were more familiar with distance education, and were able to improve its application with better supervision, monitoring, and teacher assistance in the school.

Similar to the previous consortium, the multi-school model and the multi-subject model were used to provide distance learning in this jurisdiction. The teachers providing the tutor-marker services for the multi-school model were employed within the jurisdiction's schools, and also taught regular classes. The distance education students were sometimes added to those regular classes, or teachers with incomplete teaching assignments were asked to tutor-mark four of five students for each forty minute period they had available on their timetable.

A variation of the multi-subject model was also used throughout this jurisdiction. According to the deputy superintendent, this model was used by teachers who had a small number of in-school students as well as a small number of external students allocated to a class. To lighten the preparation and teaching load the teacher/tutor-marker was able to use the distance education material with all the students whether they were in the class or not.

The reasons given for implementing distance education in this jurisdiction were similar to those described in the previous case studies. Respondents indicated that this innovation had expanded the curriculum, enhanced the curriculum by providing opportunities to do core courses at other times, and provided opportunities to satisfy the individual needs of students. Apart from the usual reasons, the deputy superintendent stressed the importance of distance education in offsetting the cost of small classes, and providing more educational technology throughout the jurisdiction.

One unexpected outcome was the increase in adult students in the jurisdiction's small schools. The deputy superintendent commented that, "our adult population has gone way up in our schools because of distance education. We've got mothers and grandmothers and whoever coming to our schools to take courses by distance education." The deputy superintendent remarked that "the adults have a sobering effect on the regular students in the distance education classes, because the [regular students] are finding that these adults are their parents' peers."

According to the deputy superintendent, each school had a distance education room for independent study, and that "our principals had a budget of $3000 to $4000 each to spend on their schools for distance education. It wasn't for computers; it was for computer tables and chairs and ancillary types of things, and it was up to them how they spent it." While the County expected the distance education students to be timetabled and supervised, principals were also allowed a great deal of freedom in the way they organized distance education. At one of the schools surveyed the principal explained that distance education was "independent learning" and staff were not scheduled to supervise, and students were not timetabled into a class at a particular time. In the other school surveyed, direct supervision was available for about half of each day and students were usually timetabled in either the distance education room or at the back of other classes.

The deputy superintendent was responsible for coordinating the tutor-marker services between schools within the jurisdiction. The principals were the distance education coordinators in their schools and responsible for coercing or convincing the school staff to volunteer their services as tutor-markers. Because of the need to encourage teachers to take on extra work as tutor-markers, the recruitment of the principals as coordinators appeared to be vital to the success of these distance education arrangements. According to the deputy superintendent, "with the size of our schools it was best that the school leader was directly involved."

According to the respondents the half-time clerical assistant appointed to each school was essential to the effectiveness of the distance education operation in each school. The clerical assistants were responsible for monitoring, faxing, filing, and sorting the externally marked courses and lessons, and making sure that "associated problems are expeditiously dealt with."

Although there was no organized teacher advisory system in either of the schools surveyed in this jurisdiction, students appeared to be well supported by the principals and teachers. In one of these schools all the senior teachers were encouraged to become acquainted with the distance education program and daily monitor the progress of their "homeroom" students involved with distance education.

While participants were generally quite pleased with the progress of distance education and the opportunities it had provided, one principal warned that there would have to be modifications to the way distance education was organized and financed. He suggested that the jurisdiction could not continue to operate distance education in the schools on a low budget, and rely on the goodwill of teachers and administrators in the schools to support the program voluntarily. The principal commented that point one of a teacher and a half-time clerical assistant in each school was not a true indication of the cost of this program.

> Because we've got a tremendous amount of teacher volunteer time, but that's not going to last; people are not willing to mark [distance education courses] as well as teach a full load. We've got a lot of people with full teaching assignments and they're marking as well, and we can't continue to do that. Either we have to pay them to do that extra marking, or we have to come up with additional personnel to do that marking.

The principal concluded that without more financial support from the County or government grants then the distance education program "just won't happen."

Case Study #5: County of Leduc

A variation of the multi-school model was chosen as the predominant mode of distance education throughout this jurisdiction's five schools with a high school component. At the time of this survey this unique operation had one "distance education teacher" centrally located at the County Centre to do the external tutor-marking. In a report to the County School Board, the technology administrator explained that

> A distance education teacher is located at the County Centre and delivers courses using technology, supplemented by visits to each [school] site. All high school mathematics courses as well as Accounting 20, 30 and Computer Processing 20, 30 are offered in this way.

The distance education teacher explained that although he "worked out of the County office" he was able to visit his 74 students in the five schools at least once each week. The administrator expressed the view that the itinerant distance education teacher concept was better than the usual tutor-marker model used elsewhere because it provided the opportunity to develop closer relationships and better understanding between the students and the itinerant distance education teacher.

According to the technology administrator, because of the initial success of the program, the French coordinator would also be involved during the second semester as an itinerant distance education teacher. "We're looking at the possibility of one more person next year, and we're looking at employing a maximum of four people in the future, if it works out." The administrator explained that the plan was to eventually employ four distance education teachers, one in each of the core subject areas, as well as have the French coordinator tutor-mark some courses.

The technology administrator explained that the jurisdiction was actually using three models of distance education, although the third one was a mathematics computer program, with "CAI with CML components," was being developed by the County to be used with their Macintosh computers. This jurisdiction was not interested in buying the Digital Microvax and CML package because the County of Leduc had only recently completed "networking" its high schools with Macintosh computers and "it didn't make a lot of sense to put in another machine."

About five people were working on the County's CAI-CML project at the time of this survey. Two full-time mathematics teachers and an assistant were employed full-time, and a professor and a number of graduate students from the University of Alberta were also working on the project on a part-time basis. While some funds were provided by the Alberta Distance Learning Centre, the County of Leduc had substantially supported the project with the expectation of eventually being able to recoup their investment by the sale of the program to other jurisdictions. The administrator explained that the Mathematics 10 course would be ready to be piloted by the next semester, and if successful would be sold through LRDC in September 1991. The Mathematics 20 and 30 courses were expected to be completed and available from the LRDC a year later.

Altogether 400 distance education credits were being taken by students in the five high schools during the first semester. This number was expected to increase significantly in subsequent semesters because of the introduction of French and the CAI-CML pilot program in Mathematics 10 during the second semesters, but also because of the initial success of the program. After only two months of the first semester a principal commented that, "we'll probably have a 95% completion rate; there's only one student, who will not make it out of the 37 doing distance education in this school. . . . The first year I came here we had 75 students taking correspondence courses and only six of them completed the courses."

Adult education was also expected to have an effect on the program in the near future. Although they were "a little leery" about the potential costs, the School Board was "enthusiastic" about providing courses to adult students through distance education. The administrator commented that, "adult education is something we haven't done very well in the past. We've offered computer courses and all the glitzy sorts of things, but for a farm mother, who wants to finish grade 12 but can't come into school we haven't done a thing. So we're really looking at that now."

Because of distance education the County of Leduc had also become involved with the Community Education Centre in the City of Leduc in an effort to provide more continuing educational opportunities for adults. According to the technology coordinator, "we're going to start cooperating with these people and offering some mathematics courses and see what happens from there. Again it's just a start, but we'll probably learn something from that."

Before distance education was implemented, correspondence courses were used extensively throughout this jurisdiction, but with very little success. In contrast to correspondence, distance education was proving to be very successful. According to the technology administrator, even though the County's high schools each have an average about 120 students, these schools have difficulty providing the range of subjects and the various levels of subjects required by their high school diploma students. Because the principals saw a major need for distance education with mathematics the County's initial focus has been in that area. In the first semester of the new distance education system, the County's five schools were able to provide all nine levels of mathematics. The administrator explained that the County's goal was to eventually employ distance education teachers in the four core areas to provide the various levels of core courses.

Before implementing distance education this jurisdiction had an impressive range of communication technology and facilities already in place or in the process of development in its five schools with a high school component. These schools were equipped with large capacity fax machines, at least 50 networked Macintosh computers in each school, satellite receiver dishes, and sophisticated video equipment.

At the time of this survey the first distance education suite had just been completed at Thorsby School, and similar facilities were planned for all high schools in the County. A teleconferencing network specifically targeted for the delivery of French and other languages was in the process of being set up, and video-conferencing was also being explored.

When possible, students taking distance education courses were timetabled and supervised in the County's five schools. The type of supervision varied, and in four of the schools the students did their distance education lessons at the back of regular classes, and in two of these cases "students were located in classrooms where a related course is going on." In the school where the students were not directly supervised there appeared to be an emphasis on informal supervision and support for the distance education students, and although a formal teacher advisory system was not in place, support within the school was readily available.

The technology administrator explained that at this early stage of the program, the regular clerical assistants had taken on the small amount of clerical work connected with the distance education program, and in some cases had also taken on some of the responsibility for facilitating the program.

According to respondents, the distance education program was progressing very well throughout this jurisdiction. A principal remarked he was surprised with the acceptance and success of the program in his school at this early stage, and was extremely pleased with the 95% completion rate his students were expected to achieve with their distance education courses. The technology administrator also expressed his satisfaction with the progress of the program and anticipated it would grow significantly in the near future.

However, the technology administrator did comment on a problem with the reading ability and inappropriate placement of lower ability students in the distance education program which depends so much on reading. He also suggested that there was a problem with the distance education technology now in use, and suggested that there was a problem with the concept of how existing technology should be used for distance education. "Right now the fax is at the pinnacle of technology in some sense, but that's because we don't have paperless offices yet; everybody deals with paper. Once everybody has one of these computers on their desk, the fax machine is dead."

Summary of the Findings: Second Question

2. What are the critical issues concerned with these organizational arrangements?

Critical Issues

Issues identified by the participants were many and varied but usually concerned minor matters which were in the process of being solved, or could be solved quickly and easily such as the supply of distance education material. Very few respondents directly addressed issues which were critical to the success and survival of distance education and its organizational arrangements. However, there were five themes, which emerged from the collection of issues and information provided in the five case studies studies that appear to be critical, and will be dealt with in the following order; organizational cooperation, leadership, concepts of learning, student supervision, and the employment conditions of tutor-markers and other personnel involved with distance education.

Organizational Cooperation

Jurisdictions with one to four small schools seemed to have no option but to join a distance education consortium or continue to use the Alberta Distance Learning Centre to expand the curriculum in their high schools. These smaller jurisdictions had much to gain by joining a distance education consortium. On their own they were unable to provide the expertise or the funds for an adequate distance education program, but it was still difficult for these normally independent and autonomous organizations to cooperate.

To implement and maintain successful distance education partnerships, jurisdictions must be prepared to surrender some of their autonomy. For example, two months into its second year respondents were critical of the CEDEC management and the consortium coordinator because of the lack of policy and procedural details. In a sense the inertia of CEDEC's decision making process was built into its organization because it was based on the principle that the autonomy of its jurisdictional members was of paramount importance. Decision making affecting the day-to-day operation of the distance education program seemed to be a tedious business as each decision had to be referred back to six "head offices." Often the approval of the Management Committee and each jurisdiction's school board was required before a decision was made at the Coordinating Committee level. Even when a decision was accepted it was not considered to be binding on all members. It was a cumbersome management process that provided little opportunity for the Coordinating Committee or its executive officer, the consortium coordinator, to provide leadership. This process restricted the development of essential elements such as the consortium agreement and a student evaluation policy to be used by the tutor-markers.

As one respondent in CEDEC suggested, an agent board and a coordinator with the power and flexibility to make decisions, and act on them quickly, would have been more appropriate for developing cooperation among the various organizations during this implementation stage. However, such a situation was rejected by the CEDEC members.

There were fewer problems with autonomy and cooperation with the other consortia. The Big Sky Consortium had evolved from a pilot program with a centralized management structure which allowed the consortium coordinator and an Agent Board the authority and opportunity to make decisions. The West Central consortium also appeared to be operating more efficiently than CEDEC because jurisdictional autonomy had not become a problem. Like the Big Sky consortium, the management was centralized with a full-time consortium director able to make decisions and provide leadership, and an Agent Board with the authority to manage the Consortium's financial and legal affairs. In both of these consortia there were no complaints about a lack of direction, and a lack of policy and operational guidelines, and generally respondents were pleased with the progress of the consortium.

Administrators in the two autonomous jurisdictions investigated the possibilities of joining a consortium, and although they claimed they had nothing to gain by joining, it seemed that losing their independence strongly influenced the decision to remain autonomous. Respondents in these autonomous jurisdictions expressed the view that the consortium concept was "too ephemeral" and "too expensive," and that it seemed feasible for them to operate their own cooperative systems with five or six schools. However, being autonomous also appealed to the local administrators, particularly principals. According to an administrator, the principals in the County of Leduc "rebelled" and refused to join a consortium. "The principals saw it as being an administrative nightmare. They didn't want to change their schools to fit into the consortium. Now that may or may not be reality, but that's the way they saw it."

Jurisdictions with only one to four small schools with a high school component appeared to have the most to gain by joining a consortium, but it was obvious during this study that they must be prepared to lose some of their autonomy. According to a deputy superintendent, jurisdictions must be prepared to "put aside their own financial difficulties and priorities and believe in the team approach." The deputy superintendent claimed that,

> The consortium idea is the best way of guaranteeing the continuation of distance education; it enables us to deliver service, because we all have strengths and weaknesses in different areas. It's like the economy of scale that you would have in a larger system.

Concepts of Teaching and Learning

Many respondents claimed that "live" teaching was the "best" way or the "only" way students should be taught in a school. A principal expressed the view that, because distance learning was mainly based on reading and writing, it was inferior to "live" traditional instruction, and "would not reach its full potential until more interactive technology was used in conjunction with the distance learning courses." A superintendent commented,

> Can kids learn as effectively with distance education as they can being taught in a classroom? I just know they can't; I just know that you'll never replace a teacher in the classroom with a distance education model unless the technology and the teaching components become much more effective than they are now.

However, there were numerous examples throughout this study which indicated that many students and some teachers believe that there are other ways and places to learn apart from a "live" teaching in a classroom. In every school surveyed the demand for distance education had far exceeded the expectations of the administrators. The students were demanding more distance education, but only a very small number of teachers were demanding more independent and individualized instruction for students. Teachers in many of the schools surveyed were complaining that they were losing classes because of the drift toward distance education, and in some schools extra fees have been imposed and restrictions have been placed on students to prevent them taking more distance education courses.

While most teachers and administrators had only one concept of how students should learn, a deputy superintendent provided an enlightened view that, "we are just beginning to realize that students learn through different styles, and distance education can be the correct style for certain students, and not the correct style for others." According to a principal who was more pragmatic,

> There have been a couple of cases where teachers have said, "Enrolment in my course is dropping while students are picking up distance education," to which we're saying, "Why isn't your class more attractive to students? Get out and sell your class if you want students in it; let them know why it's worthwhile for them to be there."

Leadership

While Fasano (1984) identified teacher control as a major gateway to technological change, in small schools often it was not the teachers who controlled the gateway to technological change, but rather the principals with more opportunities to provide leadership. The principal's leadership was significant in shaping the implementation of this innovation, and critical in influencing its continuation. According to one superintendent, "for anything to work properly, the principal has to feel it's worthwhile, and work at it."

The superintendent also commented that the responsibilities and work that come with distance education may be another burden that some principals would rather do without, and while often we are critical of the work, or lack of involvement and commitment of principals, "endlessly, we put more responsibility on them. . . . We just keep adding on, and I think that's one reason that it [distance education] is a problem." A principal commented that "it involves more time than I would have imagined, but on the other hand, I see distance education as an opportunity in our school to provide a program for our students that we couldn't do otherwise."

A director of one of the consortia stated that

> It was critical and obvious that the principals would play a major role in this whole project and that it could be successful if the principals cooperated with the consortium director, with each other, had a major role to play in the organization and were convinced that the total program would be of benefit to their schools.
>
> A great deal of my time was devoted to visiting schools, talking to principals, forming a good working relationship, discussing the total concept of distance education, and trying to gain their confidence. As in all situations of this type, some principals required more time than others and I felt that this was due more to the personality of the individual than problems that needed to be solved.

McKenna (1976) suggested that the leadership qualities of the consortium director, or coordinator, would also be "a key factor in the success of the venture" and that the management of consortia calls for entrepreneurial leadership and "authority based on the power of suggestion and persuasion--quite different from the the traditional hierarchical leadership" (p. 26). The leadership of the consortium coordinators was a significant aspect of the success of the organizations surveyed. Apart from developing lines of communication and cooperation with various participating institutions, the coordinators acknowledged that their most important role was promoting, "selling," and justifying this innovation to school boards, administrators, principals, teachers, and students and their parents.

McKenna (1976) also stated that "depending upon the extent and complexity of the consortium's activities that a full time director is essential, particularly in the early stages of a consortium's implementation and development" (p. 26). Although only the smallest of the three consortia surveyed had a full-time director, this particular consortium exhibited a level of satisfaction, sophistication, and progression which was not obvious in the two larger consortia with part-time coordinators. The three consortium coordinators agreed that during the start-up and implementation stages their positions should be full-time to do the required work and provide the necessary leadership.

Student supervision

In the literature review and in the previous chapter it was argued that proper supervision is essential for a student to succeed with distance education. A number of authors were cited to support the contention that most school students need constant contact with the specialist teacher, quick "turnaround" of work submitted for marking, and a close working relationship with an in-school supervising teacher, or home tutor, to provide support and motivation, and to facilitate distance learning. Birkett (1988) in particular emphasized that if a distance education student is to succeed, then the student, tutor/marker, and supervisor partnership "is critical and must be based on team work" (p. 124). The findings of this research agreed with Birkett's premise. For example, in the CEDEC school which emphasized personalized learning, the "triad" supervision arrangement of parents, teachers and tutor-markers supporting, motivating, encouraging, and directing students was seen as paramount in the success of students and the quality of distance education.

While distance education supervision was organized and emphasized differently in each school, there appeared to be a direct relationship between the quality and quantity of supervision, and the course completion and success rates quoted by school personnel. A consortium coordinator stated that, "I see it [supervision] as the most important element of distance education, because youngsters need guidance. They'll do the job if they're steered in the right direction." A deputy superintendent also commented that "the ones that are encouraged or supervised are having the best results. . . . To assume that if you put someone in distance learning and all of a sudden they will become motivated, all on their own, is not the case." A superintendent added that, "a significant adult has to be a significant factor in this whole thing for guidance, direction, and for motivation."

Employment of Tutor-Markers and Other Personnel

Although the tutor-marker employment arrangements were given very little consideration by respondents, from the researcher's point of view elements of these arrangements constitute the most critical issue identified in this study. The issue concerns the selection and training, payment, working conditions, and workload of tutor-markers. Unless these matters are satisfactorily addressed the potential of distance education and its ability to overcome many of the shortcomings of small schools will be seriously affected in the near future.

While the tutor-marker role is a significant change in the practice of teaching and has implications for the training and placement of teachers, there was very little preservice or inservice training of tutor-makers provided in any of the organizations surveyed. The selection procedure was usually an arbitrary process and seemed to depend on who was available rather than seeking the best person. The findings of this study agreed with Clark's (1990) assessment that

> Because a teacher is a good classroom teacher [this] does NOT imply that the same teacher will necessarily function well as a distance education teacher. Being able to teach *at a distance* is not normally part of a teacher's background, training, or aptitude. Districts offering tutor-marker services should select such teachers carefully and provide them with an appropriate amount of inservice training. (p. 23)

Apart from their selection and training, it appeared that there were anomalies with the payment, working conditions, and workload of tutor-markers. The payment of tutor-markers was a matter which some administrators claimed was complex and ill-defined, or they knew little about. It was also a matter which some of these administrators were prepared to manipulate for their jurisdiction's financial advantage. For example, two teachers tutor-marking across jurisdictional boundaries, but employed by different jurisdictions were usually paid at different scales. In another situation, while one tutor-marker may be paid as a permanent part-time teacher according to the local contract for teachers' salaries, another tutor-marker may be paid on the lower substitute teacher's scale. This situation appeared to be the case in at least one of the jurisdictions surveyed in this study. In other situations tutor-markers were arbitrarily paid a contract rate of $40 or $50 per credit, without any other employer benefits such as health care, insurance, and pension subsidies usually provided for full-time teachers. Apart from questions of pay equity for the tutor-markers, contract work or piece-rate work such as this could undermine the quality of the tutor-markers' work, and possibly affect the employment of regular teachers and undermine their conditions.

The tutor-markers' working conditions also raised several questions. Throughout the series of case studies there was no mention of compensating tutor-markers working in their own homes for the use of their facilities. While telephone connections and operating costs were usually covered by the jurisdictions, in some cases the tutor-markers were not supplied with a fax machine, but were expected to use the faxing facilities at the closest distance education school. This situation presents obvious difficulties for the tutor-markers who are expected to return the marked lessons within 36 or 48 hours.

The working conditions of tutor-markers within schools presented other problems. Usually this type of work was under-rated by administrators who often expected a teacher to tutor-mark, supervise, and coordinate the distance education students at the same time. In one or two cases these tutor-markers were also expected to do all the clerical work associated with distance education.

The full-time equivalent workload of tutor-markers was the most obvious anomaly in this study. According to various respondents, a full-time tutor-marker should be responsible for between 500 and 1000 course credits per year. In situations where teachers are allocated distance education courses to mark in lieu of spare teaching time, one consortium allocates three or four courses per 80-minute period, while a jurisdiction allocates four or five courses per 40-minute period.

Inconsistencies such as those listed above need to be addressed by some provincial authority. A deputy superintendent suggested that to overcome the variable employment practices that exist, province-wide employment contracts which stipulate fair salaries, conditions, and a reasonable workload for tutor-markers should be given urgent consideration by Alberta Education and the Alberta Teachers' Association.

The researcher's opinion, supported by many examples throughout this study, is that the employment practices associated with distance education are unacceptable, because they are inferior to the regulated conditions provided for classroom teachers. Other personnel involved with distance education were also affected by unfair expectations. Often a distance education program continued only because of the extra work and efforts expected of a consortium coordinator, principal, teacher, or clerical assistant. It was not unusual to find people doing two jobs, such as tutor-marking and supervising students at the same time; principals and deputy principals taking on an extra role as the distance education coordinator; and consortium coordinators expected to have many roles but at the same time expected to direct the implementation of a major organization. Even when funds were available to overcome these problems there was often a reluctance to employ extra staff or provide extra time for a position because of the parsimonious attitude that usually existed at the jurisdictional level, or because the distance education funds were being spent on technology which was not directly related to the distance education program.

While distance education has substantial potential for growth, unfortunately the variable and sometimes unsatisfactory employment conditions that surround this innovation will reflect on distance education and possibly inhibit that growth. The employment conditions for tutor-markers are a particular problem, and this study agrees with Clark's (1990) statement that attention should be given to the "duties, responsibilities, and authority of the tutor-markers," and "what constitutes a full-time tutor-marker's workload" (Clark, 1990).

Concluding Remarks

The objectives of the study were to provide a broad view of the distance education arrangements which schools and school systems have implemented to meet their needs in the provision of distance education. While there were similarities among the 30 schools and 16 jurisdictions surveyed in this study, the five case studies provided five unique models of collaboration and organization, and the researcher has attempted to highlight the differences that exist among the various organizations. Each organization has contributed much to the development and implementation of distance education, but at the same time they have much to learn from each other and still need to address a number of issues critical to the survival of distance education in schools.

Chapter 10

IMPLICATIONS OF THE FINDINGS

The terms *implications* and *impact* are used in this dissertation to refer to what *is affected, involved, or implied.* The following discussion is related to the literature presented in Chapter 3, and guided by the following question: What are the implications of these organizational arrangements for (a) students, (b) school personnel, and (c) the organization of schools and school systems?

Implications for Students

Distance education and its attendant technologies have been implemented in Alberta primarily to "facilitate access to equitable educational opportunities" for high school diploma students in small schools. In 1985, the Alberta Government announced a new Secondary Educational Policy which stated that,

> Growing demands are [being] placed on secondary schools to provide for the educational needs of all students. Access to better educational opportunities is possible by integrating advances in technology such as computer networking, electronic communications, and other new developments in distance education and individualized learning. (p. 8)

In 1987, Alberta Education developed "a plan for the future use of technology to expand and enhance quality educational services in distance education" with the explicit aim "to enhance the quality of educational opportunity in small schools" (1987b, p. 7). Consequently, the implications for students have been addressed initially with respect to providing *access* and *equity.* Reference is then made to student abilities, student supervision, and effective learning opportunities provided by distance education.

Access and Equity

In terms of access, most respondents agreed that Alberta Education has achieved its aim to provide access in terms of quantity; of students having access to an expanded curriculum and having access to a wider range of high school diploma subjects and their various levels. Several respondents commented that while most of these courses had "always" been available through correspondence, distance education was a more effective and equitable means of delivery and instruction. If the tutor-markers are available locally, the 75 courses offered by correspondence through the Alberta Distance Learning Centre may be provided by distance education, but the 75 courses do not include the variety of practical and vocational courses available in large urban high schools.

Equity was often interpreted by respondents in terms of the quality of distance education instruction, which respondents compared with either correspondence or traditional instruction. Almost without exception respondents expressed the view that distance education was an improvement on correspondence, but considered traditional classroom instruction to be the best mode of education for school students, and advocated its use whenever possible. They believed that the different modes were not equal, that "teacher taught classes were more valuable," and that "a teacher at the front of a class is the best method of delivery." However, distance education appeared to compare favorably with traditional instruction in terms of credits obtained. After a reasonable implementation phase of two or three years, well organized distance education programs also had completion rates and results which were similar to those produced with traditional instruction.

In spite of this success, critics of distance education suggested that education at the school level should be more than just obtaining credits, and that the process, the interaction of students and teachers, was an important element which was missing with distance education, and in that sense did not provide equity. Clark (1990) wrote that if student success is judged "in terms of credits obtained. . . then it does not appear to matter whether courses are taken through distance education or locally," but if the content and presentation matter then "the differences between the locally offered and distance versions of some courses can be significant." The researcher's observations conflict with the view that traditional instruction is always the best way of presenting course content to students. Traditional instruction may not be effective when students become passive actors, and teachers tend do most of the talking, interacting, and learning. These observations support Goodlad's 1983 findings that in a traditional classroom setting,

> Teacher talk was by far the dominant classroom activity. Teachers rarely encouraged student-to-student dialogue, or provided opportunities for students to work collaboratively in small groups, or to plan, set goals, determine alternative ways of achieving these goals . . . the emphasis was on recall, not on problem solving or enquiry. (p. 552)

In contrast to this traditional education scenario, distance education may give students alternative opportunities to take responsibility for their own learning, and through self-directed interaction and collaboration, to become independent and active learners.

As Wall (1985) suggested, irrespective of such potential, lack of acceptance of educational technology and distance education is more likely to have a political basis than an educational rationale. Fullan and Stiegelbauer (1991) suggested that, "people at all levels of the educational system have power--power most often used not to do things. Negative politics from below means constantly resisting changes; from above it means attempting to impose reform through fiat" (p. 347). Wall's study of a variety of distance education innovations indicated that although distance education compared favorably with traditional instruction and appeared to have great potential for schools and students, its future use is still uncertain. He concluded that "the major roadblocks were usually political, not technological" (p. 29). In this study the researcher also found that irrespective of the success of distance education, some principals and teachers were reluctant to take risks, and saw distance education as an intrusion, extra work, and a threat to traditional teaching and the familiar and relatively comfortable organization of schools. Fullan and Stiegelbauer (1991) suggested that

> The rhetoric of innovation underestimates, if it does not totally ignore, the real costs of attempting something new. . . . Innovation is hard work. It takes extra time and energy, even when release time is provided. It can add significantly to the normal workload. . . . It is more likely that our competence actually decreases during first attempts at trying something new. Our tendency is to return

> to familiar ways of doing things, or practice the new ways privately so as not to expose our inadequacies to peers and supervisors. (p. 318)

Apart from this type of resistance, distance education definitely has a place in small schools. Depending on how distance education is organized, presented, and supported it can significantly improve the access to equitable educational opportunities for high school diploma students in small schools. The implication is that continued support at the jurisdictional level and extra resources, particularly in terms of staff, are necessary if improvements in access and equity are to achieved through distance education initiatives.

Student Abilities

Respondents indicated that distance education was appropriate for any student able to read the print material. Irrespective of their abilities, for some students distance education was often the preferred mode of instruction. However, where teachers were concerned, traditional instruction was preferred for the more able students.

Throughout the study it appeared that more of the less-able students were taking distance education courses because teachers and administrators structured their senior program so that traditional instruction was provided for the more-able students where possible. However, several respondents indicated that this approach was unnecessary and suggested that good students would do well in either mode of instruction and learning. Once the more-able students became familiar with independent study, they usually preferred this mode and enjoyed the freedom to progress at their own rate. Although many of the less-able students have been successful with distance education, it appeared that some of these students require more direction, motivation, and individual attention.

Contrary to the policy implemented in most schools it appeared that the more able students should be given the opportunity to take more courses by distance education, because as one respondent said, "They should be capable of solving many of their own learning problems." The slower learners and students who lack abilities or self-discipline to cope with independent study should be given more personalized attention by the teachers.

The findings of this study support Clark and Schieman's (1990) suggestion that distance education "course content and methodology vis-a-vis student ability and mode of learning" is an issue which warrants further attention by researchers. In the Clark and Schieman study of distance education in Alberta, they observed that the "print materials were not appropriate for all students" and that most courses were "reading-dependent" (p. 18). They recommended the development and use of more audio-visual materials, and suggested that "independent study materials be made more palatable for less able students," it may have been more reasonable to recommend that the more-able students be given the distance education courses and the less-able students be given more attention by teachers in a regular classroom situation. The researcher found that although this was possible in many small schools, teachers preferred to teach the more able students and provide distance education courses for the less able students.

The implications are to either produce distance education course materials and processes which suit the needs of less able students, or make principals and teachers aware that if a student is unable to understand the material then they should not take a distance education course. Fullan and Stiegelbauer (1991) also reminded us that in planning distance education, greater consideration should be given to the needs of all students. He commented that,

> Effective educational change and effective education overlap in significant ways. Involving students in a consideration of the meaning and purpose of specific changes and in new forms of day-to-day learning directly addresses the knowledge, skills, and behaviors necessary for all students to become engaged in their own learning. (pp. 189-190)

Supervision

In the literature review it was argued that proper supervision was essential for a student to succeed with distance education. According to Batey and Cowell (1986) several studies have shown that school students have definite psychological and emotional learning needs, particularly with respect to distance education. The transition from being a passive and directed learner to being an independent and self-disciplined learner appears to be a problem for most school students. They need regular contact with the specialist teacher, quick "turnaround" of work submitted for marking, and a close working relationship with an in-school supervising teacher, or home tutor, to provide support and motivation, and to facilitate the distance learning process successfully (Balay, 1978; Birkett, 1988; Froese, Harris, Restall & Witherspoon, 1987; Taylor & Tomlinson, 1984). Birkett, in particular, emphasized that if a distance education student is to succeed, then the student, tutor/marker, and supervisor partnership "is critical and must be based on team work" (p. 124). Birkett identified this aspect as the most significant finding in her study of organizational support for distance education students.

Sergiovanni and Starratt (1983) suggested that the aim of student supervision by a teacher is to "maintain, change, and improve the provision and actualization of learning opportunities for students" (p. 10). In this study, supervision appeared to be the most important element of distance education. School students obviously need guidance, and if they are steered in the right direction there is no doubt that they will be successful. It is incorrect to assume that a high school student placed in a distance learning course will be able to sustain motivation without support and encouragement. Students who were adequately supervised were found to have the best results.

Because distance education supervision was organized and emphasized differently in schools, the outcomes and consequently the opinions of respondents varied accordingly. Respondents usually reported that the success of distance education students had a lot to with an interested and enthusiastic teacher who supervised the distance program. Poor results with distance education were usually blamed on "the type of student we have on distance education. Those who have had trouble in other classes. By trouble I mean not completing other classes. . . less motivated, less self-directed." That is, success was due to the teacher and the problems were due to the students.

However, there is sufficient evidence in this study and other literature to support the premise that administrators and teachers should also take responsibility for the problems and failures of students doing distance education courses. The implications are that if distance education students are adequately supervised and encouraged they will achieve at least the same level of success as traditional students.

Individualized Instruction

Most respondents indicated that distance education was used in their small schools to individualize instruction and provide a curriculum which would satisfy a wide variety of student needs. Holmberg (1986) suggested that satisfying the learning needs of individual students would have a positive effect on their learning.

One consortium coordinator suggested that distance education provides equity, at least in one sense, because students in small schools now have more options. The major impact of distance education has been to increase course offerings and cater to the individual needs of students, or in other words providing students with opportunities to take a variety of courses which suit their interests and abilities.

A principal, in one of the schools surveyed, had restructured his high school on the premise that the "empowerment" of the student was essential for effective learning, and used distance education to provide new opportunities for students to take control of their own learning. These students were not only given the opportunity to decide what to learn, but they were given the opportunity to decide the "ways and places" they preferred to learn.

Respondents noted that for some students the independence associated with distance education was a model of learning that appeals to them. According to one respondent, "we are just beginning to realize that students learn through different different styles and that distance education can be the correct style for certain students, and not the correct style for others. However, it appears that many parents, teachers, and administrators still need to recognize that distance education can provide another learning style option for students.

Summary

While respondents generally advocated the use of traditional instruction whenever possible, they agreed that distance education has had a beneficial impact on senior students in small schools. Distance education has increased the range of courses available, provided a quality of education which is superior to correspondence instruction and in some ways is a model which is more flexible than traditional instruction. Distance education has allowed students to select courses appropriate for their needs and to learn in more effective ways.

Implications for School Personnel

The following three sections will focus on the implications of the distance education organizational arrangements for principals, teachers, and clerical assistants. Implications which concern principals deal with aspects of leadership, increased workload, ownership, and attitudes towards new technology. Implications for teachers concern issues such as fear of the unknown, resistance to change, deployment of teachers, redeployment of teachers, and teachers as coordinators and tutor-markers. The final section concerns the provision of staff to perform the extra clerical work associated with distance education courses.

Implications for Principals

Leadership and management. Fasano (1984) suggested that teacher control was a major gateway to technological change. She identified teachers' attitudes, motivation, personality, and training as "important facilitators--or bottlenecks" to technological change and possibly the improvement and reorganization of education. In small schools it was often not the teachers who controlled the gateway to technological change, but rather the principals' attitudes, motivations, personalities, and abilities to provide leadership. Fullan and Stiegelbauer (1991) also indicated that there is a distinction between leadership and management, and emphasized that both require consideration by a principal if an innovation such as distance education is to succeed. They stated that,

> Leadership relates to mission, direction, inspiration. Management involves designing and carrying out plans, getting things done, working effectively with people. . . . The leadership aspects involve (1) articulating a vision, (2) getting shared ownership, (3) evolutionary planning. The management function concerns (1) negotiating demands and resource issues with the environment, and (2) coordinated and persistent problem coping. (p. 158)

The principal in each school implementing distance education was expected to provide management in terms of establishing lines of responsibility by appointing an in-school distance education coordinator, allocating clerical, teaching, and supervisory duties, timetabling teachers and students, providing counselling for students, and providing supervision of teachers and students. Apart from these duties the principal was also significant in shaping the implementation of this innovation, and critical in influencing its continuation. While a small number of principals and assistant principals had also assumed the role as school coordinator, usually this role was performed more successfully by teachers or teacher assistants.

Other demands. According to one superintendent, the responsibilities and work that go with distance education may be just another burden that some principals would rather do without. Fullan and Stiegelbauer (1991) suggested that "change is only one small part of of the forces competing for the principal's attention, and usually not the most compelling one" (p. 144). However, most of the principals in the small schools willingly took on this extra burden because they saw distance education as an opportunity to improve their high school programs. Other principals passed on the extra work either to an assistant principal or a willing teacher, and in a small number of cases the indifferent principals simply minimized the effort and minimized the distance education program. Fullan and Stiegelbauer concluded that, "given the other demands on the [principal's] role, it is no wonder that most principals do not approach their change responsibilities with enthusiasm. In the best of times very few of us go out of our way to do something that is both complex and unclear" (p. 152).

Ownership. The concept of "ownership" appeared to affect principals' efforts and support for this innovation. Principals expressed the view that ownership was important to them, and previous experiences with other Alberta Education innovations, which had come and gone, had made them feel suspicious of this initiative and unsure about the future of its funding. Fullan and Stiegelbauer (1991) stated that, "the expectation that principals should be leaders in the implementation of changes that they had no hand in developing and may not understand is especially troublesome" (p. 152). Because of their uncertainty about distance education, principals often seemed unwilling to be fully committed and limited their interest to the immediate financial benefits. An assistant principal commented that "we had two years to spend x amount of dollars, and if you didn't spend it you didn't get it, so we spent it as fast as we could get our hands on it." Some principals also felt they had no choice but to accept distance education in their schools: "The province made money available, and jurisdictions latched on to that money. . . . We were told, in fact, that we would have some involvement." The principal that made this remark had very little to say that was positive about distance education except that it gave his school an opportunity to acquire more equipment.

According to a consortium coordinator, principals have been more resistant to this innovation than teachers. Principals see distance education as a threat to their autonomy, and have reluctantly cooperated with its implementation "because they imagine someone's entering into their private little domain." Part of the role for each of the consortium coordinators was to convince principals of the benefits and the need for distance education in their schools, but irrespective of the possible merits of this innovation principals often indicated that they would prefer to control their own schools and their own funds without any intervention and control by outside agencies. A consortium coordinator commented that

> Some principals would prefer not to have distance education. They say, "Give us the money to pay for staff ourselves and we'll offer a program within the school." . . . I don't believe that can happen, because a small school can't function; they can't supply the product. If you've got twenty-six students and three staff members, you're not going to be able to offer that [a broader curriculum] unless you take those kids and haul them to the next town.

However, not all principals had to be convinced about the merits of distance education. One principal saw in distance education a potential for technological and pedagogical change that suited the contemporary and future needs of his students. Another principal also saw distance education as the beginning of a significant technological and pedagogical change, and the prelude to broader technological, organizational, and educational changes for schools in the future. He commented that "I think we should be doing more of this instead of less."

Distance education has implications for principals with respect to their attitudes, knowledge, and expectations of distance education. Principals need to be encouraged to use distance education to fill a need in their school, and discouraged from implementing distance education to acquire more resources. Also, because a principal's cooperation is essential if a distance education program is to be successful in a small school, they need to be better informed about this innovation and their role in the change process. The findings in this study are consistent with Fullan and Stiegelbauer's (1991) suggestions that "principals as much as anyone else need to develop meaning about change and the change process. Opportunities for interaction and professional development about the role of the principal in change are very much needed" (p. 167).

Implications for Teachers

The findings in this study agree with Heidt's (1978) suggestions that teachers' attitudes and ability to use distance education and new technology are influenced by a lack of experience, a lack of training, and a lack of organizational support and organizational will to change. A deputy superintendent commented that,

> There's a lot of skepticism out there among teachers. Some teachers feel it [distance education] is a means of replacing teachers in the future; others are not really sure what effect it will have on them. But I think those that are involved with distance education speak very favorably of it, so I think it's a matter of fear of the unknown.

According to an assistant principal, teachers "were slow to warm up to the idea because they were intimidated by the prospect that distance education was going to put them out of jobs. For that reason the walls of defense went up right away." A consortium coordinator commented that "I've had a lot of positive feedback" from teachers involved with distance education. Negative responses usually came from "staff members who have nothing to do with distance education." However, the coordinator explained that "within our county teacher response and support has been good, and I think that's because we have sold it as a positive type of thing from the superintendent down."

Throughout the five case studies, administrators and teachers involved with the implementation of distance education were very positive about its acceptance, success, and future. At the same time students were demanding more distance education and in some instances enrolment expectations have doubled. Irrespective of this success, administrators and teachers not directly involved with distance education can be expected to be skeptical and resist these changes unless they are given the opportunity to understand how distance education may complement the educational resources of small schools and benefit their students.

Resistance to change. Fullan and Stiegelbauer (1991) suggested that "the difficulty of learning new skills and behavior and unlearning old ones is vastly underestimated. . . . Changes in educational beliefs, teaching styles, and other practices represent profound changes affecting the teacher's professional self-definition"

(p. 120). A superintendent argued that, for a teacher to be comfortable with distance education there needs to be a change of attitude and philosophy.

> First of all there's a psychological or philosophical impact on teachers, where they begin to realize themselves as facilitators of learning, not purveyors of information, and that's coming about slowly. That's the first thing. The other thing is, of course, the methodology. No longer can you be a lecturer; you have to use a variety of systems such as cooperative learning and personalized learning. You can't think in terms of time being the main factor in learning. The main factor in learning is the person. The Carnegie unit implies that time is the only factor and a student exposed to 125 hours of a course has mastered the course. That's no longer the case. The teacher has to make sure that the student masters the course through personalized tracking of students.

The superintendent stated that while these changes in attitude and philosophy are necessary, they are "very disturbing to many teachers."

> In our system we have teachers who have been teaching the same course for 25, 30 years and really not changed very much. . . . That [situation] is really challenged by this approach, because when you are assigned as a teacher-advisor or a subject-advisor, your contacts with that student are very personal. . . . In other words, it's a much closer relationship. The relationship used to be with the subject, and the student was just a peripheral thing, whereas now the relationship is with the student and ensuring that the student has success and is, in fact, really learning. That's a threat to a lot of teachers.

In some schools the attitude was to protect the traditional pupil-teacher relationship and protect the teachers' role and position from external threats such as distance education. An assistant principal, in one of these schools remarked that, "in our situation if there is a course timetabled, then the student must take that course as opposed to a distance education class." When asked do they have any choice, the assistant principal emphatically replied, "No they don't; not at this time. To be frank about it, they won't have that option here."

A principal in another school commented that, "the reason we don't encourage distance education among students is because of the effect it would have on teacher loads." The principal explained that,

> We already have very small classes, and the board has been very generous in maintaining our staff to teach both streams [diploma and advanced diploma] and give teachers spares and so on. . . . So if you take two or three students out of each class to go on distance education, pretty soon you don't have a class left. I guess that's the main reason why we try and insist that if they have classes in school available, and unless they're really opposed to those classes, then they take the in-school classes rather than the distance education classes.

In most of the small schools surveyed, the principal and staff had decided to adapt the organization of their schools and implement distance education for the sake of their students. In these schools teachers have been deployed to coordinate, supervise, and advise distance education students and have willingly participated in the program.

Similar to the situation with principals, distance education has implications for teachers with respect to their attitudes and knowledge of distance education, and their ability to change. While teachers need to be informed about the advantages and disadvantages of distance education, they also need to be involved in the decision-making process concerning distance education. It should also be understood by the promoters of distance education that teachers may need to be convinced of the benefits distance education may provide for their students. Fullan and Stiegelbauer (1991) explained that,

> The strategies commonly used by promoters of changes, whether by legislators, administrators, or other teachers, frequently do not work because they are derived from a world or from the premises different from that of the teachers. Innovations are rationally advocated from the point of view of what is rational to the promoter, not the teachers. Sometimes innovations are rationally sold on the basis of sound theory and principles, but they turn out not to be translatable into practice with the resources at the disposal of teachers. Or innovations may contain many good ideas and resources, but assume conditions different from those faced by teachers. Other times, innovations are strongly advocated in terms of the supposed benefits for students, without clear evidence that the particular teacher's students would share the benefit. . . . The message to everyone outside the role under review is: Understand the subjective world--the phenomenology--of the role incumbents as a necessary precondition for engaging in any change effort with them.
> (pp. 130-131)

Deployment and redeployment of teachers. While distance education has allowed a more efficient deployment of regular classroom teachers in some schools, central office administrators did not foresee that the redeployment of teachers to other schools would occur because distance education had reduced their teaching loads. One deputy superintendent suggested that even if funding was reduced, the opposite situation was more likely to occur, and teachers without a full load would be able to stay in their own schools and tutor-mark for other schools in the consortium, or possibly for schools anywhere in the province.

However, the expansion of distance education was beginning to cause teachers some concern about their present positions and the possibility of having to supplement their traditional teaching with tutor-marking. A principal argued that while distance education had the potential to keep small schools "open," and keep the teachers employed in these schools, teachers should still have the opportunity to teach traditional classes. The principal also stressed that consideration must be given to the peculiarities of the small school and the workload of the teachers in these schools:

> In a small school there are a lot of things that don't fit departmental guidelines. . . . If you're the physical education teacher in a small school, it's not uncommon for you to put in four to five hundred hours a year in extracurricular time. . . . Now I don't care if he's got a pupil-teacher ratio of nine to one; this guy should not be marking distance education courses.

There was no instance, in this study, of a teacher being transferred or losing a position because of distance education, but many teachers have lost established classes and have had to become involved with distance education as facilitators or tutor-markers. As distance education continues to expand this situation may become more common and jurisdictions need to be flexible with respect to the workloads of teachers. While the redeployment of teachers did not appear to be a specific goal of the promoters of distance education they need to be aware that teachers perceive that distance education can affect their employment, and that this perception could adversely affect the successful implementation of distance education. Fullan and Stiegelbauer (1991) suggested that

> The extent to which proposals for change are defined according to only one person's or one group's reality (e.g., the policy-maker's or administrator's) is the extent to which they will encounter problems in implementation. This is not to say that subjective realities should define what is to change, but only that they are powerful constraints to change or protections against undesirable or thoughtless change. Ultimately the transformation of subjective change is the essence of change. (p. 36)

Teachers as coordinators. The teachers given the responsibility for the coordination and delivery of distance education in schools generally exhibited an exceptional enthusiasm and willingness to work hard to make this innovation succeed.

Compared to the regular teachers, the principals and assistant principals, who took on the role, were usually far less enthusiastic and less effective as coordinators. A principal related that as the coordinator during the initial year he did not have the time to effectively organize and supervise his distance education students, and consequently they achieved a relatively poor completion rate of only 65%, which he explained as follows:

> That's probably a function of having the principal monitor it. I'm sure if a teacher was monitoring it, our completion rate would have been higher, but I'm the one who has to take the responsibility for not following up the students. That's something that we have changed. . . and now we're expecting to get a 90% completion rate.

This was a typical response from principals who had taken on the responsibility for distance education in the first year of its implementation. By the start of the second year most of these principals were eager to pass on the extra work associated with distance education to a teacher or a teacher assistant, because they usually found they had insufficient time to perform the role of distance education coordinator effectively.

The distance education projects which appeared to be the most successful were coordinated by women. Why these particular teachers, all of whom had less than 3 years of recent experience, were so successful in coordinating distance education is difficult to say, but distance education coordination did not appear to be as successful with male teachers who had been established in their schools for a long time. Because they were relative newcomers, the women teachers may have been more anxious to demonstrate their abilities, more student focused, and less influenced by their peer culture which may have frowned on this innovation. The implications are that it takes energy, motivation, and interest in students to be a coordinator--a position not recommended for principals who are required to spread their interests and energy among many other tasks and responsibilities.

Teachers as tutor-markers. In the previous chapters much has been written about the emerging role of the tutor-marker. This role has significant implications for the teaching profession, and as one of the most critical issues identified in this study will require investigation in further studies. Obviously the tutor-marker is different from a regular teacher in that they focus on written work, usually work alone with limited interaction with students and other teachers, and receive less supervision and direction than a regular teacher. Previously teachers performing this role worked exclusively for the Alberta Distance Learning Centre. What does not appear to be obvious is that control of tutor-markers has been decentralized and in some ways appears to have been deregulated. This role is now under the control of school jurisdictions and in a sense is subject to a new industrial environment and requires new industrial regulations. As yet this fact has not been fully appreciated by either Alberta Education or the Alberta Teachers' Association.

A tutor-marker's role may be a full-time or a part-time teaching position, or considered part of a regular classroom teacher's work. To complicate this issue even further, tutor-markers in the consortia usually work across jurisdictional boundaries. Consequently tutor-markers may be experiencing significant differences in payment and employment conditions throughout a consortium. Working conditions may also vary throughout the same consortium. It was suggested by a deputy superintendent that, because some tutor-markers are being subjected to unfair employment practices, province-wide employment contracts which stipulate fair conditions for tutor-markers should be given urgent consideration by Alberta Education and the Alberta Teachers' Association.

In a recent feasibility study Clark (1990) stressed that attention be given to the "duties, responsibilities, and authority of the tutor-markers," and emphasized that the relevant authorities must determine "what constitutes a full-time tutor-marker's workload." Clark also advocated training programs for new tutor-markers, and stated that

> Because a teacher is a good classroom teacher [this] does NOT imply that the same teacher will necessarily function well as a distance education teacher. Being able to teach *at a distance* is not normally part of a teacher's background, training, or aptitude. Districts offering tutor-marker services should select such teachers carefully and provide them with an appropriate amount of inservice training.

Distance education and the emerging role of the tutor-marker obviously have important implications for the teaching profession with respect to the redefinition of a teacher's workload, working across jurisdictional boundaries, salary and benefits, and the issue of supervision. Although only a small number of respondents indicated an awareness or interest in this matter, the tutor-marker role and conditions of employment are issues which require further investigation, and further attention by the relevant authorities which oversee the teaching profession. Fullan and Stiegelbauer (1991) made the conclusions, which are consistent with the researcher's speculation, that "professionally rewarding workplace conditions [will] attract and retain good people" (p. 117).

Implications for Clerical Assistants

In the 30 schools surveyed in this study, the provision of clerical assistants appeared to be unrelated to the amount of clerical work generated by externally marked courses, and varied from none to a half-time assistant. In one school a clerical assistant was the distance education coordinator, and in another school a staff member classified as a "teacher-assistant" was the coordinator. In both cases the clerical aspects of the coordinator's role had apparently influenced their appointments to these positions. In some of the other schools the clerical assistants performed similar tasks and assumed similar responsibilities, but without official recognition and often as an extra workload.

The faxing, recording, distributing, and reporting associated with externally marked courses were estimated by a principal to take about 15 minutes per week for each five credit course. The 200 distance education course credits the students were taking in this particular small school represented two hours per day of extra clerical work, or 30% of the time normally allocated to the school's regular clerical duties.

In schools where extra assistance was not provided, usually the regular clerical assistants performed the extra duties, but it was obvious that this arrangement was not always appreciated by the staff. While one principal commented that, "we could probably assign a student to fax, but then we felt that might jeopardize confidentiality," in another school where students were assigned to do some of the clerical work, there had been no problems with confidentiality. The coordinator commented that, with 100 to 200 pages to be sent each day, "having someone fax everything out for me saves me a lot of time." He also commented that this arrangement allowed him to spend more time helping students. In several schools teacher time was provided for distance education coordination, but no clerical assistance was provided, the teacher/coordinators usually did most of the extra clerical work. While this was obviously an inefficient use of teacher time, participants seemed to accept that the clerical work was part of the teacher/coordinator's role.

With the increased numbers of distance education students and courses in small schools clerical assistance other than a teacher/coordinator should be provided. According to Fullan and Stiegelbauer (1991) adequate resources are essential if an innovation is to succeed. In this case clerical assistance is a resource which should have been provided in every school. Either a student doing a work-experience unit or a paid aide should be assigned to perform the clerical duties.

Summary

This study indicated that principals and teachers need to be better informed about distance education and how it may be used to complement the educational resources of small schools and benefit their students. While teachers need more information about distance education, they also need to be involved in the decision-making process of planning and implementing distance education. The tutor-marker's emerging role was identified as an issue which will require further investigation, and further attention by the relevant authorities which regulate the teaching profession. While it was suggested that an energetic teacher should perform the role of the distance education coordinator, it was also suggested that an aide or a student perform the clerical duties associated with distance education.

Implications for Schools and School Systems

Impact of Technology

In a discussion of new technology and the transformation of learning and education in Canada, Henchey (1987) stated that, "technology is a means of extending our control over our environment" (p. 42). He defined technology as follows:

> At its simplest level, a technology is a tool or instrument: a pin, a bicycle, or a printing press. It is also a process or method: a computer simulation, bureaucracy, or assembly line. It is a system that integrates instruments and elements into a structure or organization: a communications network, a technocratic state. As the influence of technology expands, it may become an environment, the medium or context within which we live and within which our institutions and our values are formed. (p. 43)

According to Wedemeyer (1981) societal changes and deployment of communication technology will force educators and policymakers to consider new non-traditional, modes of teaching and learning, and educational institutions. Papert (1980) also argued that new technology could significantly change the present organizational structure of schools and school systems. Although these predictions have a sense of science fiction about them, the findings in this study tend to agree with these arguments. As one administrator commented, "I find it amusing when educators talk about 'the future, and we'll be doing this and that with technology.' In the work place, in reality, people are already using computer technology," and suggested that schools must make a greater effort to use more technology. Henchey (1987) stated that,

> To understand the potential significance of the new information and communication technologies, both for education as a system and learning as a process, we must remember three points. First, the education system as we know it is an institution of the industrial age, built on the assumptions and modelled on the dominant institutions of that era. . . . Second, we are in a process of transition from this industrial society to an information society, a knowledge economy, and electronic culture. . . . Third, if our understanding of the new technology is generally accurate, it is not just a tool like a computer or a process like a computer-assisted instruction. It is a way of thinking, and a set of values. (p. 50)

In this survey of 30 schools and 16 jurisdictions many educators acknowledged that their ideas about education and delivery of education had changed with the introduction of basic technology, such as telephones, fax machine, and computers, currently being used with distance education programs in Alberta's small schools. Although there was little effect in some schools, respondents expressed an expectation that teaching and learning would continue or eventually change with the implementation of more sophisticated technology. While respondents indicated that the trend toward more individualized instruction would accelerate, they also expressed the view that there would always be a need for teachers. This expectation of change was succinctly described by a superintendent who commented that,

> I think you have to be on board with a vision and a philosophy that distance education is still evolving; we haven't arrived yet. . . . It is not intended to be a new form of correspondence, and people who would implement it with that kind of mind-set are not really on board with the potential that exists in distance education. . . . We're at a stage with distance education that the Wright brothers were with their third plane, but some of us have visions of Concordes.

The implications are that if technology significantly changes the way students are taught then the present organizational structure of schools and school systems will change. As one principal suggested distance education is promoting the use of technology, and "I see this type of technology, the role of the teacher, and pedagogy changing dramatically." The impact on traditional instruction will accelerate when teachers cease to view distance education and associated technology as just a new form of correspondence, and as teachers become more competent with the use of technology and adapt its interactive effects and ability to access information to new and very different teaching and learning strategies. These changes could require the redefinition of a teacher's role to be a facilitator of information, and the restructuring of schools to be centres for personalized and independent learning. The impact observed in this study was also consistent with Henchey's (1987) view that,

> Despite the historical stability of education systems as social institutions, the influence of new technology is likely to be pervasive and profound. It will shape policies and priorities, alter structures, redefine the function of institutions, transform content and curriculum, expand access and delivery systems for learning, and reshape the profession of educator. (p. 50)

Bureaucratic Nature of Schools and School Systems

While the organization of schools and school systems have been adapted, to some extent, to suit distance education, it is more likely distance education has been moulded and adapted to fit the bureaucratic nature of these organizations. According to Morgan (1986) the major disadvantage with bureaucracies is that they have "great difficulty adapting to changing circumstances" (p. 35). He also concluded that, "the mechanistic approach to organization tends to limit rather than mobilize the development of human capacities, moulding human beings to fit the requirements of mechanical organization rather than building the organization around their strengths and potentials" (p. 38). Henchey (1987) described the inflexibility of educational bureaucracies in terms of the past:

> Schools and school systems reflected the organizational structures and management techniques of business and industry. Schools were plants; boards were head offices; time was scheduled in fixed units; tasks were specialized; efficiency was achieved through bureaucratic organization; group instruction was a form of mass production; progress was a linear sequence of time, courses, and grades; content was broken down into subjects and units; learning production was measured in terms of marks and credits; adult education was an optional supplement, remedial or cultural in nature. (p. 50)

As Henchey (1987) stated, "the education system as we know it is an institution of the industrial age, built on the assumptions and modelled on the dominant institutions of that era" (p. 50). Hoy and Miskel (1987) also argued that schools and school systems have many of the attributes of a mechanistic bureaucracy: "Standardized responsibilities, technical qualifications, formal communication channels, rules and regulations, and hierarchy of authority. It is a structure geared for precision, speed, unambiguity, continuity, unity, subordination, and efficiency" (p. 135).

Henchey (1987), and Hoy and Miskel (1987) suggested that, because of their bureaucratic nature, educational institutions usually demonstrate very little flexibility with respect to change. In only one school surveyed in this study was the normal bureaucracy of the school changed substantially and adapted to accommodate the possibilities of distance education. In this instance personalized learning was emphasized, students were encouraged to learn at their own pace and progress was not seen as a linear sequence of time, learning production was not measured in terms of marks and credits but in terms of students taking control of their own learning, and adult education and community involvement were important school goals. However, the stress, uncertainty, and ambiguity related to the organizational trauma of challenging the established roles and routines of schooling eventually resulted in a change of principal and staff, and a return to the usual bureaucratic style of school.

While Henchey (1987) suggested that the "structures in education are being challenged by the new technological systems that are highly integrated, continuous, open-ended, independent of time and place, and sensitive to changing social forces" (p. 51), this study reinforced the notion that the established school bureaucracy is extremely difficult to change. Distance education appeared to be successful and acceptable, only when it was adapted to the existing organizational structure and provided the rationality and efficiency expected in a bureaucratic environment. While deviating from the accepted norms of organization was unacceptable, greater complexity and more bureaucracy was acceptable. At the school level distance education was integrated into the bureaucracy with the addition of more responsibilities for principals, new roles for teachers, more resources, and more formalized rules and regulations. At the consortium level, distance education was responsible for another layer of bureaucracy, which also appeared to operate more smoothly when the essential organizational aspects were stated, agreed upon, and centrally coordinated in a bureaucratic manner. Respondents were more likely to accept the rationality and predictability provided by a tight bureaucratic structure, than suffer a loose coalition of jurisdictions where the roles, rules, and regulations were ill-defined.

Implications for Schools

The findings of this study tend to agree with Batey and Cowell's (1986) premise, discussed in the literature review, that the more a distance education program differs from the normal procedures in a school, the greater the effect on the organization of the school. Confined within a school's bureaucratic framework, the effects include adapting new models of instruction, changing the curriculum and school facilities, and providing extra supervision, coordination, and clerical support. It was also found that the new distance education models have almost replaced correspondence education, and have the potential to successfully complement and replace the traditionally taught curriculum in small schools. New educational technology has been introduced in all the schools involved with distance education, and in some schools the classroom facilities have improved and the facilitation of learning has changed from being teacher centred to being student centred.

Apart from these impacts there are a number of other aspects which have not been highlighted in the case study descriptions. As Batey and Cowell (1986) implied, effective implementation of an innovation such as distance education with broad implications for the organization of a school requires careful planning and establishment of lines of responsibility. The school is another level of bureaucracy directed by a principal whose management function during the implementation of an innovation involves (1) negotiating demands and resource issues with the environment, and (2) coordinated and persistent problem solving. (Fullan & Stiegelbauer, 1991, p. 158). Sergiovanni and Carver (1980) also suggested that adequate planning is essential if an innovation is to survive. They stated that in a school environment,

> Planning is often viewed as a luxury which few administrators feel they can afford. The stresses of the times, the urgency and complexity of problems facing schools, and the school's tendency to revert to satisfying its needs for survival, for the elimination of uncertainty, and for seeking and maintaining a comfortable state of equilibrium are all deterrents to planning. (p. 285)

The implementation of distance education is another complex problem for a principal. For this innovation to succeed consideration must be given to obtaining and handling funds, recording progress and reporting, managing and repairing equipment, scheduling students, scheduling teachers, material supply, updating content and adapting the process to the school organization, cooperating with other educators, dealing with the community, and community assistance.

Obtaining and Handling Funds

Although the funds allocated to distance education from the provincial grant were managed by each jurisdiction, respondents indicated that school communities could influence the continuation of distance education and possibly the amount of the grants. According to respondents, it will depend on how principals, teachers, students, and parents "handle" distance education, and whether they use it for the school's and the community's advantage. It was obvious throughout the study that while jurisdictional administrators were willing to accept the grants, funds were not always spent on distance education and associated technology in the schools. This situation has implications for better monitoring of funds by Alberta Education. School communities also need to be more aware of how the provincial grants are allocated by Alberta Education and how the funds are spent by their jurisdictional administrators. However, Silver (1983) warned that one of the characteristics of a bureaucracy such as an educational jurisdiction is that, "although the organization must acquire its resources from the external environment, the resources, once acquired, are controlled and allocated by the organization's officers" (p. 77).

Recording Progress and Reporting

Respondents found that monitoring distance education student progress required more attention than may be the case with traditional instruction. To overcome this problem timelines for the distance education students were usually combined on a chart which was posted on the wall of the distance education room. While the actual marks were kept confidential, the chart was used to indicate student progress, and provide students with an element of competition. However, this short term and crude motivational strategy needs to be supported by other strategies which demonstrate concern, and allow flexibility for, the slower distance education students.

Report marks provided by tutor-markers were not always consistent with each school's method and time of reporting student progress to parents. School coordinators have overcome this problem in various ways, but it is still a concern for some principals. Consequently there is a need for a consistent policy to be worked out by the cooperating schools. Also, there is a need to maintain an efficient and effective means of communication with parents and the school community if this innovation is to succeed. Communicating and explaining progress and results appeared to be a positive form of public relations and means of developing support for this innovation

Obtaining, Managing, and Repairing Equipment

In the 1989-90 year, each school eligible for the distance education grant received a one-time only grant of between $24,000 and $49,000 according to the equity factor and the number of senior students in the school for the acquisition and installation of equipment and modification of facilities. This was apart from the recurrent annual distance education grant allocated for operating costs.

CEDEC was the only organization which had encouraged its schools to purchase the Digital Microvax computer system for the CML mathematics courses. Several respondents in the CEDEC schools complained that after only one year the Microvax 2000 needed upgrading to a larger capacity computer because of alterations and additions to the CML mathematics courses. For a small school and its jurisdiction this upgrading was a considerable expense, which was reported to be between $8,000 and $15,000. Other consortia and jurisdictions were not prepared to buy this system because of its initial cost of $23,000, its limited use, and because it was incompatible with their existing IBM or

Macintosh systems in which they had already invested substantial funds. Consequently most jurisdictions were prepared to wait until CML programing was adapted for IBM or Macintosh computers.

While the teleconferencing equipment appeared to be underused, operating the computers and the teleconferencing equipment was not a problem in most schools because teachers and clerical assistants were interested in learning or already knew how to use the equipment. Usually the fax machines were located in a school's central office and operated only by the clerical staff or the distance education coordinator. Although it was often reported that students were reluctant to use a telephone to contact their tutor-markers, telephones were available for student use with few restrictions. It is interesting to note that none of the respondents mentioned, either in interviews or in casual conversation, that students had caused any malicious damage to the distance education communication equipment. Restricting student use of equipment did not seem to be an issue in any of the schools in the survey.

Because most equipment was relatively new or still under warranty, regular repairs and maintenance did not seem to be a problem at this stage. However, because of the cost of repairs to equipment such as computers and fax machines, and the isolation of these small schools, it was anticipated that servicing this equipment may become a financial burden for jurisdictions in the future.

This situation has implications for a jurisdiction's financial planning of a distance education program. Jurisdictions should consider the financial benefits of keeping their equipment current, and avoiding costly repairs, but they should also consider allocating sufficient funds for the maintenance and up-dating of software. Much of these costs could be off-set by expanding the use of the distance education technology in each school, integrating it with other modes of instruction, and using it for the inservice of teachers, administration, and for clerical work in a school.

Scheduling Classes

Distance education classes were scheduled in a number of ways. A principal explained that,

> We've attempted to schedule the bulk of our distance education [students] into two blocks in the day, and we have a teacher assigned to each of those blocks. . . . It's given us a great deal of flexibility, because we can have one teacher working with, say, 25 different students in four or five different subjects. I'm not sure if that's ideal, but the students seem to enjoy the CML, and it seems to be working.

A principal explained a situation that existed in most of the larger schools where distance education had little or no effect on the regular scheduling of students.

> We have a full-time staff member and a clerical aide as a staffing component in the school [for the distance education program]. . . . In terms of timetabling, if our students have a spare and they're taking a distance education course, they're timetabled into the room with the distance education teacher. Attendance is monitored; they work there just as if they were taking a regular course.

In a number of schools timetabling distance education students was not an important consideration because students sat at the back of a regular class. In these situations some principals had attempted to match the distance education students with teachers who could provide assistance with a particular subject. In several schools with small distance education programs, students were allowed to work independently, or were either scheduled into a regular classroom or a dedicated distance education room and supervised casually by the principal or other available staff.

However, throughout this study there appeared to be a link between the organizational structure of distance education and the success of students. The students in distance education programs which had a designated room and a designated teacher were more likely to be successful than students in other situations. Principals should be aware that, not only is this situation more successful for students, it can provide more timetabling flexibility for a small school if "we can have one teacher working with 25 students in four or five different subjects."

Scheduling Staff

While most respondents agreed that distance education provided flexibility for scheduling students, there was a mixed response to whether it provided flexibility for scheduling staff. In the personalized learning school where "it's all very much team teaching," the principal enthusiastically agreed that flexibility existed for scheduling staff and students.

In a group of more traditional schools, principals were not always in favor of scheduling teachers to supervise distance education classes, because they believed that supervision of distance education took staff away from the regular program and also restricted the timetabling of the traditional classes.

In a small number of schools, extra teachers were employed to supervise and tutor-mark distance education courses, and in some schools distance education had "been picked up by the people in place." In one school the principal explained that distance education had no effect on the scheduling of teachers because "virtually all our distance education takes place in the library, so our teacher-librarian has, in a sense, picked up an extra task in her day." This was also the case where distance education students sat at the back of a regular class, or where the principal and deputy principal casually supervised the program.

Irrespective of how it is organized, in a small school distance education has implications for the whole curriculum and should be considered as an important element when constructing a school's timetable. Throughout this study it was observed that a well organized high school program with an integrated distance education component provided more flexibility for both staff and students. It was also observed that this integration and demonstrated commitment by a principal and teachers to a distance education program can have a positive impact on the success of students. Distance education adversely affected the scheduling of staff and the success of students only when it was considered as something separate, and when principals and teachers attempted to protect the status quo and keep all the elements of their previous high school programs.

Materials Supply

While many participants complained about the supply of distance education materials, many of their problems could have been overcome by early planning and ordering of materials. The respondents who complained most about the late supply of materials, usually ordered their materials from LRDC at the busiest time, at the beginning of September, and often had to wait as long as two months for delivery. While this may have been an exceptional situation--at a time when distance education was being implemented throughout the province for the first time, and LRDC was overwhelmed with an unexpected number of orders for distance education course materials--there are implications for the future supply of materials. This situation suggests that pre-registration of distance education students and the ordering of distance education materials in June is necessary if all students are to begin their courses at the start of September in the following school year.

Updating Content and Adapting the Process

A principal made a comment which was supported by only a small number of respondents that he thought some distance education materials needed to be updated and strengthened. For example, students in one school had to revert to using typewriters because the school's computers and word processors could not be used for the out-of-date Typing 10 course. According to a distance education coordinator a number of other courses were not only out-of-date, but presented incorrect information. For example, she claimed that the Law 30 course she taught "live" was very different to the "old" Law 30 course taken by the distance education students. While it was possible for teachers to update or enrich distance education courses taught and marked in the school it was more difficult to change courses, and provide regular testing according to the schools' requirements when all the material was supplied externally from ACS and marked externally by tutor-markers.

A school principal commented that updating the content and adopting a better assessment process has required his jurisdiction to employ a full-time clerical assistant. The principal explained: "we supplement our lessons quite extensively beyond what ACS provides for the students, and we make up all our own exams and numerous assignments." Whether these changes were always necessary is debatable; while some of the courses were out of date, teachers also appeared to want to add their own touches irrespective of how current the material might be.

This situation has implications for the design of the distance education material. The material should be presented in such a way that it allows teachers to contribute to, and up-date the material where they feel there is a need. There is also a need to provide information and coordinate these updates with the Alberta Distance Learning Centre, in order to assist the authors and developers of the courses to provide better learning materials.

Cooperating with Other Educators

While principals in particular seemed to resent outside interference with the operation of their schools, generally a good working relationship existed between principals and the consortium coordinators. However, the relationship between the school principals and the tutor-markers was not always as positive. The tension that appeared to exist between principals and tutor-markers usually concerned who was ultimately responsible for students. A principal summed up this situation with the following comment:

> I like to control what happens in my school, with the cooperation of the teachers who are here. An extension of that is the distance education teachers [tutor-markers]. The problem is that the distance education teachers want the same ownership over students that they'd have if they were teaching right here in my school.

However, the relationship between the school coordinators and tutor-markers was far less strained. Irrespective of the anonymity of the participants this was a relationship that coordinators in schools usually considered important. Several coordinators related similar stories which focused on an evolving relationship of cooperation between the coordinator, the tutor-marker, and the student. A relationship which appeared to be an essential part of the supervision and ultimately the success of distance education students.

Principal control of the management of distance education students is an issue which needs to be addressed by the principals and the management of the distance education consortia. Whatever is decided with respect to the management of students should be presented and discussed with tutor-markers during an inservice session. Also, the distance education programs might be enhanced if principals, coordinators, and students had the opportunity to meet tutor-markers face-to-face.

Dealing with the Community

Adult students represent a significant potential market for distance education. Unfortunately, there is a major problem with subsidizing adult students where distance education is managed by consortia because there is no subsidy from the provincial government for students over the age of 19. Throughout the three consortia it was left to each school or jurisdiction to decide what they would provide for adult students. Generally the adult students were welcome in their local schools, and could take any course offered by the school or by distance education, but they were expected to pay the fees for the externally marked courses. These fees could cost an adult student between $300 and $550 for a five credit course, or they could take the course by correspondence through the Alberta Distance Learning Centre (ADLC) at a cost of between $100 to $150.

In the two autonomous jurisdictions, the payment of course fees did not seem to be a problem, and the adult student population in their schools had increased because of distance education. A deputy superintendent in one of the autonomous jurisdictions noted that because his jurisdiction did not belong to a consortium it was able to provide the distance education courses at a relatively low cost which was about the same as that charged by ADLC. The average cost was estimated to be about $25 per course credit compared to an average of about $80 per credit in the three consortia previously described. The deputy superintendent remarked that one reason adult students were welcome in the jurisdiction's schools was because they had "a sobering effect on the regular students in the distance education classes."

While most schools employed only certificated teachers as tutor-markers, one of the 30 schools surveyed invited community members with relevant expertise to provide extra tutoring with the distance education students. The school coordinator stated that "we use resource people everywhere, whoever fits the bill." This school had scheduled a three hour evening tutorial session, once a week, when the in-school students and the adult students met with their school advisors as well as the six extra community tutors. The coordinator stated that the community tutors have been "really good, and they enjoy it," and the students get "one-on-one" tutoring.

Community involvement in distance education has implications which were unexpected at the beginning of this study. While there is a need to address the funding problems which prevent more adults from taking distance education courses in their local community schools, adult students provide an avenue of increasing the support for distance education and providing regular school students with adult role models. Also, members of the community with relevant expertise may be an untapped source of extra tutorial assistance for distance education students.

Summary

Probably the most significant implication concerned with the implementation of this innovation is that new educational technology has been introduced in all the schools involved with distance education, and in some schools the classroom facilities have improved and the facilitation of learning has changed from being teacher centred to being student centred.

Other implications which affect the organization of schools concern the need for better planning by school principals. There is a need for better monitoring of funds provided for distance education; a consistent policy with respect to assessing and reporting student progress among cooperating schools; financial planning with respect to new telecommunications and computer equipment; integration of new and expensive technology into other areas of schools; a designated room and a designated teacher to supervise scheduled distance education classes; registration of students and ordering of materials in June; designing distance education materials to allow up-dating and adapting of content by teachers; coordination of the updating with ADLC and the course designers; addressing the issue of the management of students; inservicing tutor-markers and informing them of their roles; providing opportunities for tutor-markers to meet the people they work with at a distance; addressing the funding problems which prevent adult students from accessing distance education in their local schools; and involving other community members as tutors for distance education students.

Implications for School Systems

According to Fasano (1986), with the introduction of new technology and innovations such as distance education, educational institutions would engage in a transformation of organization and structure by forming partnerships, and cooperating and coordinating with other parts of their own systems, and that eventually this interaction will occur with other institutions "given the dispersed location of expertise" (p. 105). This prediction summarizes the organizational developments brought about by the implementation of distance education and its associated technology in Alberta schools. This transformation has occurred with the formation of consortium partnerships by cooperative jurisdictions, and the formation of cooperative arrangements within autonomous jurisdictions.

It was stated in the literature review that the consortium arrangements would provide administrative expertise with regard to contractual arrangements, acquisition and compatibility of technology, student support services, professional development, course development, and consolidation and expansion of community and institutional cooperation. Konrad and Small (1989) argued that "distance education cannot achieve its potential without collaboration." They suggested that collaboration could reduce costs, eliminate duplication, strengthen the quality of courses and services, and provide "better options for an ever-increasing diversity of learners" (p. 202).

However, it must be stressed that Konrad and Small (1989) were writing about collaboration with post-secondary and other educational institutions, and about established collaborative arrangements as opposed to the distance education arrangements which had been implemented in the school systems for only one or two years before this study was conducted. Many of the higher level operations listed above such as "sharing expertise with regard to contractual arrangements, acquisition and compatibility of technology" were functions which had not been formally addressed by the school administrators in Alberta school jurisdictions. At the time of this survey much of the cooperative activity centred on how and why schools should cooperate, whether jurisdictions should join consortia, and how much it would cost.

Consortia, or not Consortia?

A superintendent argued that the team approach and the formation of consortia had definite advantages for small school systems, while a principal in one of the larger systems with four high schools had another view, and argued that the consortium arrangements did not satisfy his jurisdiction's needs. Overall, consortia appeared to be providing a necessary service to jurisdictions with one, two or three small schools, at a cost which was acceptable to most administrators. Part of that cost was the loss of some of a jurisdiction's autonomy and freedom to make their own decisions. Principals in particular were resistant to joining a consortium and losing control over what happens in their school.

The two autonomous jurisdictions, the County of Camrose with six high schools and the County of Leduc with five high schools, had formed their own distance education cooperatives after considering the advantages and disadvantages of becoming members of a consortium. In both cases economics influenced their decisions. The deputy superintendent in the County of Camrose commented, "I didn't believe in the economy of scale in this case. I knew, because of the way consortia had set up distance education, that purchasing courses was going to be very, very expensive, and I realized we couldn't afford it. The deputy superintendent also explained that it was feasible for the jurisdiction to operate its own mini-consortium with the expertise that was available in its six small schools, and with the funding that was provided by the distance education grant for five of these schools. He also expressed the view that the jurisdiction was prepared to rely on its own resources, and was glad to be able to remain autonomous and make its own financial decisions. Also, the schools in the autonomous jurisdictions were reasonably close and this obviously had some influence on these jurisdictions operating their own distance education programs.

While the team approach and consortia are suitable for some situations, the autonomous jurisdictions had also developed effective organizations and demonstrated that each jurisdiction should be allowed to assess its own needs and judge whether or not to join a consortium.

Consortium Agreements

The consortium agreements were dealt with in detail in the case studies in the previous chapters. The omission of essential elements and lack of sophistication of these agreements reflected distance education's early stage of implementation, and reflected their authors' lack of experience with this aspect of collaboration. Each of the agreements lacked aspects which could be considered essential for the efficient operation and direction of a consortium in a bureaucratic educational system that seeks rationality and precision, and demands stated roles, rules, and goals.

The essential elements of a post-secondary consortium agreement suggested by McKenna (1976) were outlined in the literature review and repeated below for clarification. According to McKenna, a consortium agreement must include procedures for these matters:

> 1. Joining or withdrawing from membership or disbanding it.
>
> 2. Determining the details for funding arrangements as in amounts to be collected, manner of collection, holding of funds, and disbursement.
>
> 3. The basis for representation--which institutions may join, by whom they shall be represented and the number of representatives, etc.
>
> 4. Governance. Will the consortium be guided by an executive board, chairman, etc? (p. 10)

With respect to school level consortia it became obvious in this study that three more aspects should be added to McKenna's list. According to the findings of this study McKenna's list is applicable to schools and jurisdictions, but it is not comprehensive and a consortium agreement should also include the following details:

5. A mission statement, or in other words, details of what the consortium is expected to accomplish.

6. Operational details of the consortium.

7. Outline of the consortium coordinator's responsibilities, role, and conditions of employment.

8. Outline of the tutor-marker's responsibilities, role, and conditions of employment.

The roles and expectations of participants in the schools, such as the principal, the distance education coordinators, the clerical assistants, and the students should be left as a jurisdictional or school matter. Organization of these aspects could be suggested in a consortium handbook with other consortium policy and suggested school policy for distance education.

The implications here concern the need to review consortia agreements and include the aspects described above. There is also a need for the consortia managements to develop appropriate and more complete policies and handbooks and in most cases determine the goals of distance education and the goals of the consortium.

Coordination

While coordination as a concept was not discussed in any of the case studies, the aspects of coordination highlighted by Dennison (1986), and included in the literature review, were addressed indirectly during this study. Dennison, referring to post-secondary collaboration, cautioned that "if there is to be effective coordination of distance education activities within a region, certain conditions must be met" (p. 189). Dennison listed the conditions as follows:

> 1. The mandates and jurisdictions of all affected institutions must be respected, while ensuring that such mandates do not obstruct coordination.
>
> 2. Leadership by the appropriate government agency is essential, although government does not necessarily need to assume the managerial function in the process.
>
> 3. The prime beneficiary of any new arrangement must be the potential students rather than the institutions involved.
>
> 4. Funding policies should provide incentives to encourage institutional participation rather than the disincentives, such as lost revenue.
>
> 5. Institutions involved should have the opportunity to participate in policy making and in the resolution of disputes. (p. 189)

According to the findings of this study, four of the five conditions suggested by Dennison (1986) were also applicable to the effective coordination of consortia among schools and jurisdictions. However, the second item above, which begins with "Leadership by an appropriate government agency," could be reworded with respect to the school and regional context and read, "Leadership by an agency board." It appeared in this study that an agency board would be the appropriate governing body to provide the leadership which Dennison suggested is a necessary condition for good coordination.

The list of conditions which Dennison (1986) suggested for the effective coordination of distance education have implications for the three consortia surveyed in this study. The five conditions provide concepts which need to be considered by the consortia management in formulating basic policies and operational procedures.

The Consortium Management and Coordination

To direct the sharing of "people and resources" among its six jurisdictions CEDEC had a two-tiered decision making body made up of the "management team" and the "coordinating team." The daily management of the consortium was the responsibility of a quarter-time executive coordinator. However, the consortium depended to a large extent on cooperative decision-making which involved the school board of each member jurisdiction in all policy and procedural matters.

To manage its collaboration of 10 jurisdictions the Big Sky Consortium had three levels of government; the Trustee Committee, the Management Committee, and the Executive Committee. While the daily operation of the consortium was directed and managed a half-time consortium coordinator most of the operational and policy decisions were made by an executive committee and reviewed and ratified by the Management and Trustee Committees.

The WCADEC management structure consisted of two levels of government referred to as the Board of Governors, and the Management Committee. The daily operation of distance education throughout the consortium's 10 jurisdictions was directed and managed by a consortium director and supported by an Agent Board. Policy and procedural decisions were made autocratically by the consortium coordinator and at a later time reviewed and ratified by the Management Committee and the Board of Governors.

The effectiveness of the operation of each consortia did not appear to be related to its management structure, but rather to the empowerment of each coordinator. While CEDEC had the simplest management structure, it appeared to be the least effective because of the emphasis on the autonomy of the jurisdictional members and the cumbersome decision making process which involved all school boards. Also, CEDEC's quarter-time consortium coordinator was given little opportunity to make decisions and demonstrate leadership. While the management structures of the other consortia were more complex, the empowerment of the executive and coordinators to make decisions, the extra time allocated to these positions, and the empowerment of an agent board to act on behalf of the other jurisdictions seemed to contribute to the effectiveness of the Big Sky and the West Central consortia. The implications are that a coordinator or small executive, supported by an Agent Board should be given the authority to make decisions and exercise leadership on behalf of a consortium's member jurisdictions.

Consortium Coordinators

McKenna (1976) stated that "depending upon the extent and complexity of the consortium's activities that a full time director is essential, particularly in the early stages of a consortium's implementation and development" (p. 26). The findings in this study support McKenna's statement. The three consortia coordinators agreed that during the start-up and implementation stages their positions should be full-time. The findings of this study also agree with Grupe's (1971) suggestion that "two or three years may pass before major projects leave ground zero," and that the management of such an enterprise "requires sophisticated patience . . . and demands unusual flexibility if a phoenix is to rise out of the ashes" (p. 750). Consequently this position should be at least a two year appointment to allow for the implementation of distance education, and the establishment of its supporting consortium structure.

McKenna (1976) suggested that the leadership qualities of the director will be "a key factor in the success of the venture" and that management of consortia calls for entrepreneurial leadership and "authority based on the power of suggestion and persuasion--quite different from the the traditional hierarchical leadership" (p. 26). The leadership of the consortium coordinators was a significant aspect of the success of the organizations surveyed, and as McKenna stated their entrepreneurial leadership role was quite different from the traditional hierarchical role. Apart from developing lines of communication and cooperation with various participating institutions, the coordinators acknowledged that their most important role was promoting, "selling," and justifying this innovation to school boards, administrators, teachers, and students and their parents.

The implications are that coordinator who is able to be an entrepreneur, and develop communication, cooperation, and commitment among individuals and institutions is probably the appropriate type of person to be employed as a consortium coordinator. However, there is also a need to provide the coordinator with the time, resources, and organizational support such as an agency board to perform the complex task of bringing together normally autonomous school jurisdictions to form a consortium.

Financial Arrangements

During 1987 and 1988 extra funds were restricted to schools and jurisdictions involved in the distance education "pilot" studies. At the beginning of the 1989-90 school year a Distance Education Grant was made available by the Provincial Government for all "eligible" schools with less than 150 high school students, and at least 30 kilometers from a larger high school with 150 or more senior students. A third condition was an equity component which took into account the ability of local government and school jurisdictions to pay for their own educational needs. The purpose of the Grant was stated as follows:

> To provide qualifying school jurisdictions with funding to enable low enrolment senior high schools to offer a wider range of student courses than under present circumstances. The grant will support the acquisition of Distance Education

> programs, instructional services, technologies and coordination services at the school, school jurisdiction and consortia levels. (p. 2.2)

The distance education funds are paid to the jurisdictions, and while small jurisdictions are encouraged to share their resources, the larger jurisdictions with sufficient resources are able to set up their own distance education systems. The main difference between the consortia and the autonomous jurisdictions was their concerns about finance. Distance education has moved the jurisdictional members of consortia, in particular, into a new area of financial management. The distance education consortia in Alberta exist mainly for coordination of the buying and selling of distance education credits and the subsequent collection and distribution of funds. With the autonomous jurisdictions the transfer of resources was an internal matter which did not require a financial infrastructure to collect and transfer funds.

Like most business enterprises, the implications for consortia are that there is a need for efficient and effective fiscal management. This was a role which the agency boards for the Big Sky and Central West consortia had assumed and performed well, and provided a model which should be considered by other consortia.

Consortium Fees

The financial arrangements in the three consortia outlined in detail in the previous chapters indicated the three consortia had significantly different financial infrastructures. In CEDEC the cost of $110 per credit appeared to be rather exorbitant compared to the cost of $65 per credit in Big Sky, and the $60 per credit, plus $6000 per year for each member school in the West Central consortium.

The CEDEC fees in particular were the cause of some discontent and suspicion throughout that consortium. The surcharge of $10 per credit for the consortium's operational costs was not considered to be a problem. However, because each jurisdiction was paid $100 per credit for the tutor-marker services they provided, there was the potential and temptation to make a large profit at the expense of other jurisdictions and their own tutor-markers. Although the consortium coordinator's aim was to share the buying and selling of credits among the jurisdictions, this was not always possible and the larger jurisdictions appeared to profit at the expense of the smaller ones.

In the Big Sky Consortium the financial arrangements were better organized and were documented in the consortium agreement. The fee of $65 per credit included a surcharge for the consortium costs for administration and providing the consortium's tutor-marker services. The tutor-markers were employed by their local jurisdictions at the local contract rate of pay, but the jurisdictions were compensated by the consortium for whatever it cost them to employ the tutor-markers. If there was any profit to be made from the distance education course fees then the consortium was able to use these funds for the benefit of all its members.

The West Central Alberta Distance Education Consortium also had a system that did not provide many profiteering opportunities. To begin with all but a very small amount of this consortium's credits were tutor-marked by regular teachers employed within the member schools. So the payment of the tutor-markers was not a problem, and hardly a consideration for the consortium. However, the sharing of the services among the jurisdictions once again seemed to favour the larger jurisdictions, but at a cost of only $60 per credit the disadvantage to the jurisdictions having to buy tutor-marker services was not as great as it was with CEDEC.

The implications are that there is a need to monitor the costs and review these fee structures to eliminate the inequities that exist. These fees structures were initially set up at a time when the conditions surrounding distance education, such as costs and number of students, were uncertain. After several years of operation these organizations should be able to design more appropriate fee structures than the ones that existed at the time of this survey.

Cost of Distance Education for Schools

Apart from the fee schedules and arrangements discussed above, very little information regarding the actual cost of using distance education in schools was forthcoming from interviews and documents collected during this survey except for one rare example. Most administrators were reluctant to provide details of their distance education financial arrangements, but indicated that without the grant the distance education program would not continue in their schools.

However, an assessment of the costs of distance education in small schools was provided by a jurisdictional member of the Big Sky Consortium, which commissioned Clark (1990) to produce a "Feasibility Study of the Implementation of Distance Education." Clark initially projected the costs of providing a total of 100 distance education course credits for two of the jurisdiction's schools, and compared this with the cost of providing a total of 1000 credits for the two schools. Clark claimed that if only 100 credits were offered, the cost to the jurisdiction would be $178 per credit, and if 1000 credits were offered the cost would be about $121 per credit. If the provincial distance education operating grant was taken into account the costs for this particular jurisdiction would be reduced to $93 and $45 per credit, respectively for the two situations.

While distance education is usually an "add on" to a small school's curriculum rather than being an alternative to traditional instruction, the costs above are acceptable. However, if distance education is considered an alternative, and replaces traditional instruction, then Clark's (1990) projected costs should be adjusted to allow for the saving in traditional teaching time. Consequently the cost of distance education would be much less than that stated above. For example, if a classroom teacher in a small high school has a workload of 750 credits for an average salary of $45,000 in one year, and if the regular teaching is reduced by 100 credits there should be an overall saving of $6,000. If the regular teaching time is reduced by 1000 credits there should be an overall saving of

$60,000. Therefore, if 100 distance education course credits were offered they would cost the jurisdiction $33 per credit, and if 1000 credits were offered the jurisdiction could actually make a profit of $15 per credit, or a total of $15000 profit from the provincial operating grant.

While this speculative analysis of the costs suggests that distance education is cost effective, there were no data to support this claim, and although some respondents were convinced that this innovation would compare favorably with the costs of traditional instruction, other respondents suggested it was too early to assess the actual costs. The implications are that there is a need for Alberta Education, consortia, and jurisdictions to monitor the costs of providing distance education in schools, and a need to share this information with others.

Summary

The implications for school systems were discussed in terms of organizational structure, consortium management, financial arrangements, and the bureaucratic nature of schools and school systems.

While consortia appeared to be providing a necessary service to jurisdictions with one, two or three small schools, at a cost which was acceptable to most administrators, the autonomous jurisdictions had also developed effective organizations and demonstrated that each jurisdiction should be allowed to assess its own needs and judge whether or not to join a consortium. In both cases economics influenced their decisions not to join a consortium.

However, the implications dealt with above concern the consortium arrangements. To begin with there is a need for consortia to develop appropriate and more complete consortium agreements, policies, handbooks, and operational procedures. To develop cooperation there is a need for a coordinator who is able to be an entrepreneur, and develop lines of communication and commitment among individuals and institutions. There is also a need for consortia to provide their coordinators with the time, resources, and organizational support, and empower them to make decisions and exercise leadership. There is also a need to do all these things within a bureaucratic framework which seeks rationality and precision, and demands stated roles, rules, and goals.

With respect to the financial aspects of consortia, there is a need to regularly review the consortia fee structures and eliminate the inequities that exist. There also appeared to be a need for Alberta Education, consortia, and jurisdictions to monitor the costs of providing distance education in schools, and a need to share this information with others.

Suggestions for Further Research

The following suggestions for further research begin with six topics concerned with aspects of the critical issues addressed in the previous chapter, and are followed by six further suggestions for research which emerged from the collection of issues and information provided throughout the five case studies.

Critical Issues for Further Research

Organizational cooperation. It was obvious during this study that organizations collaborating to provide distance education must be prepared to surrender some of their autonomy, and according to a deputy superintendent, "put aside their own financial difficulties and priorities and believe in the team approach." This was not always the case, but it was not always clear why administrators of schools and jurisdictions wished to protect their autonomy, and in what ways alternative jurisdictional structures would affect local decision making.

Concepts of teaching and learning. Many respondents claimed that "live" teaching was the "best" way or the "only" way school students should be taught. A principal expressed the view that because distance learning was mainly based on reading and writing it was inferior to "live" traditional instruction, and "would not reach its full potential until more interactive technology was used in conjunction with the distance learning courses." Is traditional instruction better than other models of learning for school students? And in what ways can technology improve distance learning?

Leadership. While Fasano (1984) identified teacher control as a major gateway to technological change, in small schools it was often not the teachers who controlled the gateway to technological change, but rather the principals. The principal's leadership was significant in shaping the implementation of this innovation, and critical in influencing its continuation. According to one superintendent, "for anything to work properly, the principal has to feel it's worthwhile, and work at it." Is this hypothesis true in all schools or just small schools? How important is the leadership of other participants such as the consortium coordinator and the school coordinator in the implementation of an innovation such as distance education?

Student supervision. While distance education supervision was organized and emphasized differently in each school, there appeared to be a direct relationship between the quality and quantity of supervision, and the course completion and success rates quoted by school personnel. A consortium coordinator stated that, "I see it [supervision] as the most important element of distance education, because youngsters need guidance." Once again this is a hypothesis which could be tested with further research.

The tutor-marker role. The tutor-marker role is a significant change in the practice of teaching and could have implications for the training and placement of teachers. They usually work alone with very little supervision or interaction with other teachers. A tutor-marker's role may be a full-time or a part-time teaching position, or appended to a regular classroom teacher's work. According to a study by Clark (1990),"because a teacher is a good classroom teacher [this] does NOT imply that the same teacher will necessarily function well as a distance education teacher. Being able to teach *at a distance* is not normally part of a teacher's background, training, or aptitude."

Consequently, further research is required to answer the question: "How different is this role and what extra training should teachers have to perform this role effectively?

Employment practices. Generally the employment practices associated with distance education appeared to be inferior to the conditions provided for regular classroom teachers. While tutor-markers appeared to be the least protected of any group, other personnel were also affected by unfair expectations. However, further research is required to establish the extent of these conditions and to provide recommendations for eliminating such practices.

Six Further Suggestions for Research

A closer look. While this study has provided a broad view, it would now be a logical step or steps to narrow the researcher's focus to look more closely at one consortium, one jurisdiction, one school, one position, or even one student involved with distance education.

A wider view. It would also be a logical step to enlarge the focus of this study and expand the overview provided in this thesis with more qualitative information about the other three consortia and the other autonomous jurisdictions which exist at present in Alberta.

Change over time. This study is a description of a particular context at a particular time, and in a sense invites further investigation to find out what has changed over time. Such a longitudinal study could have theoretical significance for the implementation and establishment of organizational change.

Theoretical aspects. While the implications for practice were emphasized throughout the many facets of this thesis, the implications for theory were neglected to some extent. Consequently this study provides further opportunities for research which might emphasize theoretical aspects such as empowerment and leadership, and the pedagogical aspects of distance learning such as the implications of new ways, places and styles of learning.

A look at the success of independent learners. A respondent commented that, "distance education has to foster independence; it has to foster self-initiative, and if doesn't do that then we're losing a valuable potential." Other respondents predicted that students who adapted to the independent style of learning required with distance education were more likely to be successful with their future tertiary education. Once again this suggests a longitudinal case study of one or two students, or a small number of students, or a quantitative study of a much larger sample to find out whether distance education students are more successful because of their distance education experience.

Financial analysis of distance education. Respondents were particularly vague about the financial aspects of distance education during the implementation stages when the survey for this study was conducted. After three or four years of distance education operation there should be sufficient financial information available to allow a thorough analysis of the costs of distance education and a comparison with the costs of traditional instruction.

Concluding Remarks

The implications of distance education identified by participants justified the introductory sentence in this thesis that "distance education and communication technologies offer promising educational possibilities, but may also pose a challenge to the organizational structure of traditional education." While participants indicated that distance technology has significant and extensive implications for school students, school personnel, and the organization of schools and school systems they also indicated that the real impact is yet to come.

Distance technology has just begun to provide small schools with the means to expand and diversify their curricula, to provide students with new learning opportunities, and to provide the impetus to move away from teacher centred education toward student centred, and student directed learning. While principals have gained more responsibility, teachers have gained more resources and educational tools, the opportunity to experiment with new models of teaching and learning, and new roles as tutor-markers, coordinators, and facilitators of distance education.

Apart from providing an expanded curriculum, distance education has replaced the correspondence mode, and demonstrated it has the potential to successfully complement or replace the traditionally taught curriculum in small schools. Distance education has implications for the provision of new facilities and upgrading of classrooms to house the distance education programs and new telecommunications technology. Distance education also has implications for schools with respect to funding, recording and reporting progress, managing and repairing equipment, scheduling students, scheduling teachers, material supply, curriculum, adult students, and cooperating with other educators and community members outside the school.

Distance education also has significant implications for school systems. While some respondents argued that the team approach and the formation of consortia had definite advantages for small school systems, some administrators preferred to remain autonomous and organize their own finances and make their own decisions. However, consortia appeared to be providing a necessary and viable service to jurisdictions with one, two, or three schools with high school diploma programs, at a cost which was acceptable to most administrators.

Five critical issues, which need to be addressed if distance education is to survive in schools, were identified from the information participants provided in the five case studies. The five issues concerned organizational cooperation, leadership, concepts of learning, student supervision, and the employment conditions of tutor-markers and other personnel involved with distance education.

Because this study has attempted to cover such a broad area there is much that is incomplete and much that needs further research. However, the objectives of the study have been achieved by providing a broad description of the progress of distance education in Alberta and identifying the critical issues to be addressed if that progress is to continue.

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APPENDIX A

LETTER TO REQUEST ACCESS TO CONDUCT INTERVIEWS

October 16, 1990

Superintendent of Schools

Dear ----------,

The purpose of this letter is to formally request authorization to conduct doctoral research within your jurisdiction over the next few months. The research concerns the organizational arrangements schools and school jurisdictions have made to meet their needs in the provision of distance education.

For your information, I have enclosed a brief overview and statement of the objectives and significance of the study. The case study approach, which I will be using, involves interviewing, observation and document analysis, the primary data source being the interview. Therefore, I will be seeking the cooperation of various individuals such as central office personnel, principals and teachers involved with distance education.

The proposed research will follow the University of Alberta, Department of Educational Administration's Research Ethics Review Policies and Procedures (1988). All participants will be informed that their involvement is voluntary, they can withdraw at any time and their anonymity and confidentiality will be respected and guarded as far as possible. Where anonymity cannot be assured, the researcher will obtain consent from the participants prior to including their views in the study.

It is my belief that this study will be useful to administrators in Alberta in understanding those factors that have been influential in shaping the organizational arrangements schools and school jurisdictions have made to meet their needs in the provision of distance education in schools.

I hope this request receives a favorable response.

Yours sincerely,

Peter Hough

APPENDIX B

INTERVIEW QUESTIONS

APPENDIX B

INTERVIEW QUESTIONS

The interview protocols are expanded versions of the major questions, and questions which conclude sections of the chapter on related literature. The protocols have been developed to guide and focus interviews with superintendents, central office administrators, principals and teachers. The major questions guiding the research are listed as follows:

1. What organizational arrangements are currently being implemented at the jurisdictional and school levels to deal with the provision of distance education in small schools?

2. What are the critical issues concerned with these organizational arrangements?

3. What are the implications of these organizational arrangements for (a) students, (b) school personnel, and (c) the organization of schools and school systems?

Superintendent/Administrators' Interview Protocol

Consortium/Jurisdictional Arrangements:

1. What is your role with respect to distance education?
2. Why is distance education is being used in schools in your jurisdiction?
3. In what ways is this jurisdiction supporting the use of distance education in your schools with respect to:
    a. Policy?
    b. Finance?
    c. Extra staffing?
    d. D.E. consultants/coordinators?
4. Why does this jurisdiction belong to a distance education consortium?
5. How is the consortium organized and what are its responsibilities?
6. Decision making: How are decisions made for the consortium?
    a. Majority vote/consensus?
    b. Could you give an example?
7. Policy development: How is policy made for the consortium?
    a. Who is involved?
    b. Could you give an example?
8. What decisions have been made by the consortium with respect to:
    a. Finance?
    b. The tutor marking system?
    c. Student registration?
    d. Deployment of personnel?
9. Leadership: Who is responsible for communication, and developing cooperation and commitment with respect to distance education at:
    a. The consortium level?
    b. The jurisdictional level?
10. What are the financial implications of these consortium arrangements?
    a. Are they cost effective now?
    b. Will they be cost-effective without the Distance Education Grant?
11. What are the effects of these consortium arrangements on:
    a. The continuation of distance education?
    b. The provision of educational opportunities for students?
    c. The deployment of teachers and tutor-markers?

12. What other organizational changes have been implemented within or between jurisdictions to support the use of distance education?

13. What critical issues or problems still need to be addressed with respect to the organization and operation of the consortium?

School Arrangements:

14. In what ways has distance education affected the organization and management of schools?
    a. What students are involved?
    b. Increased the quantity of courses offered?
    c. Improved the quality of courses offered?
    d. Provided flexibility for scheduling students?
    e. Provided flexibility for scheduling staff?
    f. Provided flexibility for the deployment of staffing within the Jurisdiction?

15. What other organizational changes have been implemented within schools or between schools to support the use of distance education?

16. What impact has distance education had on:
    a. Students?
    b. Teachers?
    c. Parents and other members of the school communities?

17. What critical issues or problems still need to be addressed with respect to distance education and the way it is organized in your schools?

Principals' Interview Protocol

School Arrangements:

1. What is your role with respect to distance education?
2. Why is distance education being used in your school?
    a. What students are involved?
    b. How many?
    c. What subjects are they taking?
3. How is distance education organized in your school?
4. In what ways has D.E. changed or affected your work as a teacher or principal?
5. In what ways has D.E. changed or affected the organization of your school?
    a. Increased the quantity of courses offered?
    b. Improved the quality of courses offered?
    c. Provided flexibility for scheduling students?
    d. Provided flexibility for scheduling staff?
    e. Provided flexibility for the deployment of staffing within the Jurisdiction?
6. What is your organizational relationship with the tutor-markers?
7. What other changes have been implemented to facilitate distance education in your school?
8. What impact has distance education had on:
    a. Students?
    b. Other teachers?
    c. Parents and the community?

9 Will distance education continue:
    a. The way it is presently organized in your school?
    b. Without the Provincial Grant?

10. What issues or problems still need to be addressed with respect to the organization of distance education in your school?

Jurisdictional Arrangements:

11. In what ways is your jurisdiction supporting distance education in your school with respect to:
    a. Policy?
    b. Finance?
    c. Staffing?
    d. D.E. consultants/coordinators?
    e. Inservice?
    f. Public relations?
12. Why does this jurisdiction belong to a distance education consortium?
13. How is the consortium organized and what are its responsibilities?
14. Decision making: How are decisions made?
    a. Majority vote/consensus?
    b. Could you give an example?
15. Policy development: How is policy made for the consortium?
    a. Who is involved?
    b. Could you give an example?
16. Planning: What consortium decisions have been made with respect to:
    a. Finance?
    b. The tutor-marker system?
    c. Student registration?
    d. Deployment of personnel?
    e. The Tutor Marker system?
17. Leadership: Who is responsible for communication, and developing cooperation and commitment with respect to distance education at:
    a. The school level?
    a. The jurisdictional level?
    b. The consortium level?
18. What are the financial implications of the consortium arrangements?
    a. Are they cost effective now?
    b. Will they be cost-effective without the Distance Education Grant?
19. What are the effects of these consortium arrangements on:
    a. The continuation of distance education?
    b. The provision of educational opportunities for students?
    c. The deployment of teachers and tutor-markers?

20. What other organizational changes have been implemented within or between jurisdictions to support the use of distance education?

21. What critical issues or problems still need to be addressed with respect to the organization and operation of the consortium?

Teachers' Interview Protocol

School Arrangements:

1. What is your role with respect to distance education?

2. Why is distance education being used in your school?
    a. What students are involved?
    b. How many?
    c. What subjects are they taking?

3. How is distance education organized in your school?

4. In what ways has distance education changed, or affected your work as a teacher?

5. In what ways has distance education changed or affected the organization of your school?
    a. Increased the quantity of courses offered?
    b. Improved the quality of courses offered?
    c. Provided flexibility for scheduling students?
    d. Provided flexibility for scheduling staff?
    e. Provided flexibility for the deployment of staffing within the Jurisdiction?

6. What is your organizational relationship with the tutor-markers?

7. What other organizational changes have been implemented to facilitate the use of distance education in your school?

8. What impact has distance education had on:
    a. Students?
    b. Other teachers?
    c. Parents and the community?

9. Will distance education continue
    a. The way it is presently organized in your school?
    b. Without the Provincial Grant?

10. What issues or problems still need to be addressed with respect to the organization of distance education in your school?

Jurisdictional Arrangements:

11. In what ways is your jurisdiction supporting the use of distance education in your schools with respect to:
    a. Policy?
    b. Finance?
    c. Staffing?
    d. D.E. consultants/coordinators?
    e. Inservice?
    f. Public relations?

12. Why does this jurisdiction belong to a distance education consortium?

13. How is the consortium organized and what are its responsibilities?

14. Leadership: Who is responsible for communication, and developing cooperation and commitment with respect to distance education at:
    a. The school level?
    a. The jurisdictional level?
    b. The consortium level?

15. What are the effects of these consortium arrangements on:
    a. The continuation of distance education?
    b. The provision of educational opportunities for students?
    c. The deployment of teachers and tutor-markers?

16. What other organizational changes have been implemented within or between jurisdictions to support the use of distance education?

17. What critical issues or problems still need to be addressed with respect to the organization and operation of the consortium?

APPENDIX C

CEDEC CONSORTIUM AGREEMENT

Central
East
Distance
Education
Consortium

AGREEMENT

THIS AGREEMENT MADE EFFECTIVE THIS 5TH. DAY OF NOVEMBER, A.D., 1990 BETWEEN:

THE BOARD OF TRUSTEES/GOVERNORS OF

COUNTY OF BEAVER #9

- AND -

COUNTY OF MINBURN #27

- AND -

COUNTY OF VERMILION RIVER #24

- AND -

EAST CENTRAL ALBERTA CATHOLIC SCHOOLS ASSOCIATION
DISTRICTS #31, #49 #65, & #97

- AND -

LAKELAND COLLEGE

- AND -

PROVOST SCHOOL DISTRICT #33

- AND -

WAINWRIGHT SCHOOL DIVISION #32

WHEREAS THE PARTIES HERETO ARE DESIROUS OF FORMING A CONSORTIUM FOR THE PUPOSE OF FACILITATING THE PROVISION OF DISTANCE EDUCATION.

NOW THEREFORE THE PARTIES HERETO AGREE AS FOLLOWS:

1. THE PARTIES HERETO AGREE THAT THERE SHALL BE ESTABLISHED A CONSORTIUM TO BE KNOWN AS THE **CENTRAL EAST DISTANCE EDUCATION CONSORTIUM** (HEREINAFTER REFERRED TO AS CEDEC) WHOSE PRIMARY FUNCTION IS TO PROVIDE DISTANCE EDUCATION SERVICES FOR MEMBER JURISDICTIONS.

2. EACH MEMBER JURISDICTION SHALL APPOINT ITS **CHIEF EXECUTIVE OFFICER** OR DESIGNATE TO THE MANAGEMENT COMMITTEE.

   EACH MEMBER JURISDICTION SHALL APPOINT A **TRUSTEE/GOVERNOR** OR DESIGNATE TO SIT ON THE MANAGEMENT COMMITTEE.

3. THE MANAGEMENT COMMITTEE IS THE GOVERNING BODY OF **CEDEC.**

   A. **CEDEC** OPERATIONS WILL BE GOVERNED BY A POLICY HANDBOOK APPROVED BY THE MANAGEMENT COMMITTEE.

   B. THE MANAGEMENT COMMITTEE WILL DETERMINE ITS OWN OPERATIONAL PROCEDURES AND WILL SELECT A CHAIRPERSON AND A RECORDING SECRETARY.

   C. THE MANAGEMENT COMMITTEE SHALL MEET AT LEAST ONCE EACH SCHOOL YEAR.

   D. EACH MEMBER JURISDICTION SHALL HAVE ONE VOTE ON THIS COMMITTEE.

   IN EXECISING ITS POWERS, THE MANAGEMENT COMMITTEE SHALL BE GUIDED BY THE OPERATIONAL PRINCIPLES SET OUT IN THE POLICY HANDBOOK.

4. THE MANAGEMENT COMMITTEE SHALL ESTABLISH THE CONTRIBUTIONS AND PAYMENTS, FOR THE SERVICES PROVIDED

THROUGH **CEDEC** WHICH SHALL BE RECOMMENDED TO THE PARTIES HERETO FOR APPROVAL PRIOR TO MARCH 1 EACH YEAR.

THE ATTACHED ADDENDUM "A" REPRESENTS THE CURRENT FEES FOR SERVICES RENDERED THROUGH **CEDEC.**

5. A. NEW MEMBERS MAY BE ACCEPTED INTO THE CONSORTIUM BY A MAJORITY VOTE OF THE MANAGEMENT COMMITTEE UNDER TERMS AND CONDITIONS ESTABLISHED BY THE MANAGEMENT COMMITTEE.

   B. MEMBERS MAY OPT OUT OF THE THE CONSORTIUM EFFECTIVE AT THE END OF THAT SCHOOL YEAR BY PROVIDING WRITTEN NOTICE TO THE CHAIRPERSON OF THE MANAGEMENT COMMITTEE BY APRIL 1 OF THE SCHOOL YEAR AND WITH CURRENT OBLIGATIONS MET.

   C. CONTINUING MEMBERSHIP IN **CEDEC** IS CONTINGENT ON A JURISDICTION MEETING ITS OBLIGATIONS TO **CEDEC**.

6. THE AGREEMENT CAN BE AMENDED FROM TIME TO TIME BY AGREEMENT OF THE MEMBER BOARDS.

7. THERE SHALL BE AN EXECUTIVE COORDINATOR WHON WILL PERFORM THE DUTIES OUTLINED IN THE POLICY HANDBOOK.

8. THIS AGREEMENT SHALL BE IN EFFECT FROM THE DATE OF SIGNING UNTIL SUCH TIME IT IS TERMINATED.

IN WITNESS WHEROF THE PARTIES HERETO HAVE EXECUTED THIS AGREEMENT EFFECTIVE THE DATE FIRST SHOWN ABOVE.

SIGNED SEALED AND DELIVERED BY THE BOARD OF TRUSTEES/GOVERNORS OF:

COUNTY OF BEAVER #9
OF BOX 140, RYLEY, ALBERTA T0B 4B0

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- AND -

COUNTY OF MINBURN #27
OF BOX 550, VEGREVILLE, ALBERTA T0B 4L0

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- AND -

COUNTY OF VERMILION RIVER #24
OF BOX 69, KITSCOTY, ALBERTA T0B 4L0

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- AND -

EAST CENTRAL ALBERTA CATHOLIC SCHOOLS ASSOCIATION DISTRICTS #31, #49 #65, & #97 OF BOX 1240, WAINWRIGHT, ALBERTA T0B 4P0

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- AND -

LAKELAND COLLEGE
OF VERMILION, ALBERTA T0B 4M0

-------------------------- --------------------------

- AND -

PROVOST SCHOOL DISTRICT #33
OF BOX 178, PROVOST, ALBERTA T0B 3S0

-------------------------- --------------------------

- AND -

WAINWRIGHT SCHOOL DIVISION #32
OF BOX 1530, WAINWRIGHT, ALBERT T0B 4P0

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ADDENDUM 'A'

1. FOR MARKER SERVICES IN **CEDEC** THE FEE SHALL BE ONE HUNDRED DOLLARS ($100.00) PER CREDIT DELIVERED, PAYABLE TO THE JURISDICTION PROVIDING THE TUTOR MARKER.

2. FOR TUTOR MARKER SERVICES TO NON-MEMBER JURISDICTIONS THE FEE WILL BE ONE HUNDRED AND TWENTY FIVE DOLLARS ($125.00) PER CREDIT DELIVERED, PAYABLE TO THE JURISDICTION PROVIDING THE TUTOR MARKER.

3. FOR EXECUTIVE COORDINATION SERVICES AN ADDITIONAL FEE OF TEN (10%0 OF THE TUTOR MARKER SERVICE PER CREDIT DELIVERED THROUGH THE CONSORTIUM WILL BE PAID TO THE JURISDICTION PROVIDING THE **EXECUTIVE COORDINATOR** SERVICE.

APPENDIX D

CEDEC POLICY HANDBOOK

Central

East

Distance

Education

Consortium

POLICY HANDBOOK

PHILOSOPHY AND PRINCIPLES OF CEDEC

WE BELIEVE

1. THAT EACH OF OUR JURISDICTIONS HAVE THE RESPONSIBILITY TO PROVIDE THE BEST POSSIBLE EDUCATIONAL OPPORTUNITIES FOR THEIR STUDENTS.

2. THAT DISTANCE EDUCATION ENHANCES OPPORTUNITIES FOR STUDENTS TO ACCESS PROGRAMS OTHERWISE NOT AVAILABLE TO THEM.

3. THAT BY COOPERATING AMONG OUR JURISDICTIONS A MORE EFFECTIVE AND EFFICIENT PROGRAM CAN BE PROVIDED.

4. COOPERATION CAN AND WILL BE ENHANCED THROUGH A CONSORTIUM MODEL WHICH PLANS AND MANAGES DELIVERY OF DISTANCE EDUCATION PROGRAMS FOR OUR STUDENTS.

5. THAT THE CONSORTIUM IS AN ENHANCEMENT OF SERVICE TO JURISDICTION CLIENTS AND IN NO WAY SHOULD IMPEDE OR RESTRICT THE AUTONOMOUS OPERATIONS OF MEMBER JURISDICTIONS.

GOVERNANCE OF CEDEC

1. **CEDEC** IS A VOLUNTARY AFFILIATION OF ITS MEMBER JURISDICTIONS, GOVERNED BY MUTUAL AGREEMENT OF ITS MEMBERS.

2. **CEDEC** WILL OPERATE UNDER THE DIRECTION OF A MANAGEMENT COMMITTEE AS DEFINED IN THE AGREEMENT. THE INDIVIDUAL

   MANAGEMENT COMMITTEE MEMBERS WILL SERVE AS LIASISON BETWEEN **CEDEC** AND THEIR RESPECTIVE BOARDS.

3. EACH MEMBER OF **CEDEC** IS RESPONSIBLE FOR THE OPERATION OF DISTANCE EDUCATION WITHIN ITS JURISDICTION.

4. THE DAY-TO-DAY OPERATIONS OF **CEDEC** WILL BE UNDER THE DIRECTION OF THE EXECUTIVE COORDINATOR WHO WILL WORK CLOSELY WITH THE COORDINATING COMMITTEE WHICH WILL CONSIST OF THE DISTANCE EDUCATION COORDINATORS APPOINTED BY EACH MEMBER JURISDICTION.

5. THE EXECUTIVE COORDINATOR SHALL BE A MEMBER OF THE DISTANCE EDUCATION COORDINATING COMMITTEE.

MANAGEMENT COMMITTEE

THE MANAGEMENT COMMITTEE SHALL:

1. MEET AT LEAST ONCE EACH SCHOOL YEAR.
2. ESTABLISH AND REVIEW POLICIES GOVERNING THE OPERATION OF **CEDEC**.
3. PREPARE AN ANNUAL BUDGET FOR THE SUBSEQUENT SCHOOL YEAR WHICH DETERMINES THE RATES, CREDITS, EXECUTIVE COORDINATOR'S COSTS, AND OTHER COSTS TO BE CHARGED TO **CEDEC** AND OTHER USERS.
4. PREPARE AN ANNUAL REPORT INCLUDING A STATEMENT OF FINANCIAL TRANSACTIONS OF **CEDEC** FOR ITS MEMBER JURISDICTIONS BY OCTOBER 30 OF THE SUBSEQUENT SCHOOL YEAR. THIS REPORT WILL BE BOTH DESCRIPTIVE AND EVALUATIVE.
5. ESTABLISH ANNUALLY THE FEES FOR ALL **CEDEC** SERVICES.
6. MAKE ANNUAL DESIGNATION OF THE EXECUTIVE COORDINATOR.

COORDINATING COMMITTEE

THE COORDINATING COMMITTEE SHALL:

1. RECOMMEND POLICY.
2. WITHIN THE SCOPE OF APPROVED POLICIES, DEVELOP AND MAITAIN PROCEDURES FOR LONG TERM AND DAY-TO-DAY OPERATION OF **CEDEC**.
3. MEET AT LEAST BI-MONTHLY DURING THE SCHOOL YEAR.
4. BE CHAIRED BY THE EXECUTIVE COORDINATOR.
5. MAINTAIN COMMUNICATION AMONG MEMEBERS OF **CEDEC** TO FACILITATE DAY-TO-DAY OPERATIONS.
6. MONITOR AND EVALUATE PROGRAM DELIVERY.
7. MAINTAIN RECORDS OF PROCEDINGS.

8. RECOMMEND PROGRAM PLANS TO MANAGEMENT COMMITTEE IDENTIFYING STAFF, PROGRAM AND CAPITAL REQUIREMENTS.

9. PLAN FOR ORIENTATION, TRAINING AND LIASISON OF DISTANCE EDUCATION PERSONNEL.

10. DEVELOP A DETAILED COORDINATOR FOR APPROVAL BY THE MANAGEMENT COMMITTEE.

EXECUTIVE COORDINATOR [ALSO SEE FOLLOWING PAGE]

THE EXECUTIVE COORDINATOR SHALL:

BE RESPONSIBLE FOR THE EFFECTIVE DELIVERY OF DISTANCE EDUCATION SERVICES WITHIN **CEDEC**.

JURISDICTION COORDINATORS

THE JURISDICTION COORDINATOR SHALL:

HAVE HIS/HER ROLE RESPONSIBILITIES DEFINED BY JURISDICTIONAL DESCRIPTION AND THE **CEDEC** POLICY HANDBOOK.

CENTRAL EAST DISTANCE EDUCATION CONSORTIUM

EXECUTIVE COORDINATOR RESPONSIBILITIES

1. ARRANGE WITH PARTICIPATING BOARDS FOR THE DISTANCE EDUCATION TEACHERS.

2. ARRANGE OR CONDUCT ORIENTATION, INSERVICE AND INFORMATION DISSEMINATION RESPECTING DISTANCE EDUCATION IN THE CONSORTIUM.

3. COLLECT AND AMALGATE ALL SCHOOL LISTS OF COURSES AND STUDENT ENROLMENTS.

4. COORDINATE RESEARCH INITIATIVES, EVALUATION ACTIVITIES, VISITING GROUPS, ETC.

5. RESPOND TO AND ASSIST ALL SCHOOL STAFF AND DISTANCE EDUCATION TEACHERS, AS NECESSARY.

6. DEVELOP FOR CONSIDERATION OF THE MANAGEMENT COMMITTEE THE CONSORTIUM BUDGET.

7. REPORT TO THE MANAGEMENT COMMITTEE TO PROVIDE INFORMATION AND TO RECEIVE DIRECTION.

8. ACT AS THE RECORDING SECRETARY FOR BOTH THE **CEDEC** COORDINATING COMMITTEE AND THE **CEDEC** MANAGEMENT COMMITTEE.

9. ATTEND ON BEHALF OF **CEDEC** DISTANCE EDUCATION FUNCTIONS AS ARE APPROPRIATE TO THE NEEDS AND INTERESTS OF THE CONSORTIUM.

APPROVED BY MANAGEMENT COMMITTEE
APRIL 12, 1991.

APPENDIX E

BIG SKY CONSORTIUM AGREEMENT

BIG SKY DISTANCE EDUCATION CONSORTIUM

MEMORANDUM OF AGREEMENT

1990

THIS AGREEMENT made effective this __________ day of __________, 1990, between:

The Board of Trustees of:

Banff School District No. 102

and

Berry Creek School Division No. 1

and

Mount Rundle School Division No. 64

and

Neutral Hills School Division No. 15

and

County of Paintearth No. 18

Rangeland School Division No. 9

and

Rocky View School Division No. 41

and

Starland School Division No. 30

and

Three Hills School Division No. 60

and

County of Wheatland No. 16

WHEREAS the parties hereto are desirous of forming a consortium for the purpose of facilitating the provision of distance education.

NOW THEREFORE the parties hereto agree as follows:

A. TRUSTEESHIP

The parties hereto agree that there shall be established a Big Sky Distance Education Consortium Trustee Committee (hereinafter called the Trustee Committee) consisting of one representative from each of the parties hereto. The Trustee Committee shall be responsible for developing policy for the operation of the Consortium and providing direction to the Management Committee. The Trustee Committee shall elect from its membership a chairman, and shall meet at the call of the Chairman as necessary in the conduct of Consortium business, but shall meet annually for the election of a Chairman, approval of the Budget, and the conduct of such Consortium business as shall be brought before the Trustee Committee at that time.

B. MANAGEMENT

1. The parties hereto agree that there shall be established a Big Sky Distance Education Consortium Management Committee (hereinafter called the Management Committee), consisting of one representative from each of the parties hereto with responsibility for making policy recommendations to the Trustee Committee, implementing policy and overseeing the operation of the Consortium. The Management Committee shall elect from its membership a chairman, and shall meet at the call of the Chairman as necessary to oversee the operation of the Consortium.

.../2

B. MANAGEMENT - (continued)

2. Each representative to the Management Committee shall be the Superintendent of Schools or designate, and shall be appointed by resolution of each of the parties hereto. The members of the Management Committee may attend meetings of the Trustee Committee as non-voting participants.

3. One of the parties hereto shall be designated as Agent Board to provide support and accommodation for the Consortium Distance Education Coordinator (hereinafter called the Coordinator), and supervision and finance thereunto inclusive of salary, benefits and expenses, and to carry out other responsibilities as outlined in point #5 of this agreement.

4. Responsibilities of the Management Committee

The Management Committee shall establish at its first meeting an Executive Committee consisting of the Chairman of the Management Committee and two additional members elected from the Management Committee. The Executive Committee shall be charged with implementing the policies of the Trustee Committee. In addition, the Management Committee shall hire a Coordinator who shall conduct the day-to-day business of the Consortium and serve, ex officio, as a member of the Executive Committee and the Management Committee. The Executive Committee shall met at the pleasure of the Chairman in consultation with the Coordinator.

In addition, the Management Committee shall have the following responsibilities:

(a) to review policy governing all matters relative to the effective and efficient delivery of distance education programs to the students served by the Consortium;

(b) to review and recommend to the Trustee Committee the annual report and annual operating budget prepared and submitted by the Executive Committee prior to October 31 and August 31, respectively, of each year of operation;

(c) in consultation with the Superintendent of the Agent Board, to review on an annual basis the position of the Coordinator, and evaluate the incumbent;

(d) to make recommendations to the respective parties hereto to hire the distance education teachers (tutor/markers) which are deemed necessary by the Executive Committee;

(e) to consider and approve agreements with other persons or agencies for delivery of distance education services as may from time to time be brought before the Management Committee;

(f) to invite representatives of Alberta Education or other agencies to attend meetings in an advisory capacity.

.../3

5. Responsibilities of the Agent Board

The Agent Board shall be responsible for the following:

(a) to supervise, accommodate and support (including salary and secretarial support) the Coordinator;

(b) to provide the services of a Secretary-Treasurer to the Consortium, including provision for an annual audit, Consortium payments and accounts, Consortium records and minutes, and any other secretarial and financial services as may be required by the Consortium Board;

(c) to maintain any Consortium equipment not owned by the parties hereto.

6. Responsibilities of the Executive Committee

The Executive Committee, in consultation with the Coordinator, shall be responsible for the following:

(a) to implement policy as established by the Trustee Committee;

(b) to present the annual report to the Trustee Committee prior to October 31;

(c) to present the annual operating budget to the Trustee Committee prior to August 31;

(d) to review and recommend to the Management Committee the role and responsibilities of the Coordinator and adjustments thereto;

(e) to establish the need and make recommendations to the Management Committee for distance education teachers (tutor/markers), and provide for evaluation of incumbent distance education teachers in consultation with the superintendents of the parties which have hired them;

(f) to review working conditions of the distance education teachers including credit loads, conditions of local contracts, salary adjustments per semester, and other conditions as may from time to time affect distance education teachers;

(g) to maintain such Consortium records and statistics as the Trustee and Management Committees may from time to time require.

7. Responsibilities of the Consortium Coordinator

The Coordinator, under the supervision of the Agent Board's Superintendent and in consultation with the Agent Board's Secretary Treasurer and the Executive Committee, shall be responsible for:

.../4

7. Responsibilities of the Consortium Coordinator - (continued)

   (a) conduct of the day-to-day business of the Consortium;

   (b) implementation of policy;

   (c) resolution of operational issues;

   (d) preparation of the budget and annual report;

   (e) preparation of other reports and documents as required;

   (f) establishment and conduct of distance education in-service as required;

   (g) calculation of Consortium expenses such as costs charged on a credit basis to individual parties hereof;

   (h) such other matters as may be required for the effective and efficient daily operation of the distance education program of the Consortium.

C. FINANCE

1. The parties agree that the Consortium shall be financed on a cost recovery premise based on course credits delivered and received.

2. The parties further agree that initially each shall pay start-up funding to the Agent Board based on the number of schools participating at $1,000.00 per school, such funding to be offset against costs incurred by the respective parties in the receipt and delivery of course credits by distance education as determined at the end of June of the first year of operation.

3. The parties agree that the cost per credit received from the Consortium shall be assessed at $65.00/credit payable to the Consortium twice yearly based upon September 30 and February 28 distance education credit counts. Ten month distance education courses shall be assessed based upon the September 30 credit count for these courses. The parties further agree that cost per credit delivered shall be awarded by the Consortium to the delivering part at $10.00 per credit payable twice yearly based upon September 30 and February 28 distance education credit counts. Also, distance education teacher (tutor/marker) salaries shall be paid by the Consortium to the employing parties by November 30 and April 30. The parties agree further that all other distance education expenses, inclusive of lesson materials and consumables, telephone line charges, equipment and in-school supervision and administration costs, incurred by the parties in the delivery of distance education courses to their resident students, are a cost to each party.

4. The Secretary-Treasurer of the Agent Board, in consultation with the Coordinator, shall determine credits accessed from the Consortium by the parties hereto, credits delivered by the parties, and payment deficits and credits respectively. Appeals in the matter of course credits delivered or received and the payments therefore shall be made to the Trustee Committee. Parties hereto agree that the Trustee Committee's determination in these matters shall be final and binding.

.../5

C. FINANCE - (continued)

5. The Agent Board shall pay the Coordinator and the Consortium support staff, if any, salaries, expenses, and benefits as determined by the Agent Board's collective agreement and support staff salary schedule. Further, the Agent Board shall pay any and all Consortium equipment purchase and maintenance costs of equipment not owned by the parties hereto. The Agent Board shall pay accounting and audit expenses.

6. The Agent Board shall recover expenses incurred in #5 above from the credit cost difference assessed and reimbursed in #3 above. Accounting and audit expenses incurred by the Agent Board shall be recovered at $.45 per credit delivered by the Consortium.

7. The parties hereto shall assume responsibility for hiring, supervision, evaluation, salaries and benefits in accordance with their respective local bargaining agreements for all Consortium distance education teachers (tutor/markers) which they may from time to time employ. Further, the parties hereto shall assume all responsibility for other staff which they may from time to time employ in their respective distance education programs.

D. INDEMNITY AND TERMINATION

1. Parties hereto accept full responsibility for the education of their resident students including responsibility for courses delivered to their students by distance education.

2. Parties hereto may terminate their membership in the Consortium upon submission in writing to the Trustee Committee of their intention to do so at least six months prior to the date of termination. Upon termination, all payments owing shall become due and payable immediately.

E. APPLICATION FOR MEMBERSHIP

Parties desiring to join the Consortium may do so at the pleasure of the Trustee Committee upon submission in writing to the Trustee Committee and under the conditions set out in this contract and as may be subsequently set out by the Trustee Committee. Parties so admitted to the Consortium shall become a signatory to the then current Big Sky Distance Education Consortium Agreement.

F. AMENDMENTS

Authority to amend this agreement as necessary is delegated to the Trustee Committee. Amendments made to this agreement shall be submitted in writing to the signatories hereto. Amendment proposals to this agreement may be made in writing to the Trustee Committee.

APPENDIX F

WEST CENTRAL ALBERTA CONSORTIUM AGREEMENT

WEST CENTRAL ALBERTA
DISTANCE EDUCATION CONSORTIUM
AGREEMENT

THIS AGREEMENT made effective this day of A.D., 1990.

BETWEEN:

THE BOARD OF TRUSTEES OF

ROCKY MOUNTAIN SCHOOL DIVISION NO. 15

- and -

THE COUNTY OF WETASKIWIN NO. 10

- and -

JASPER SCHOOL DISTRICT NO. 3063

- and -

YELLOWHEAD SCHOOL DIVISION NO. 12

- and -

THE COUNTY OF MOUNTAIN VIEW NO. 17

- and -

THE COUNTY OF LACOMBE NO. 14

- and -

LEDUC ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT NO. 132

- and -

TWIN RIVERS SCHOOL DIVISION NO. 65

- and -

GRANDE CACHE SCHOOL DISTRICT NO. 5258

AGREEMENT

WHEREAS the parties hereto are desirous of forming a Consortium for the purpose of facilitating the provision of distance education.

AND WHEREAS the parties are desirous of creating a management structure for the Consortium through which policy decisions on behalf of the Consortium will be made by a body to be known as a Board of Governors and, in addition to, have the day-to-day business operation of the Consortium dealt with by a Management Committee, the decisions of which Committee shall be operationalized by one of the members of the Consortium, which member shall be known as the Agent Board.

NOW THEREFORE the parties hereto agree as follows:

1. The parties hereto agree that there shall be established, a Board of Governors consisting of one representative appointed by the Board of the school jurisdictions from each of the parties hereto, which shall be known as the West Central Alberta Distance Education Consortium.

2. Each representative to the Board of Governors:

    a. shall be appointed by resolution of his or her school jurisdiction and, in each case, shall specify the term of appointment, if any specific term is intended.

    b. shall specify that the appointment is at the pleasure of the appointing school jurisdiction.

3. Once each of the parties hereto has passed a resolution appointing a person to the Board of Governors of the Consortium as hereinbefore contemplated, it shall notify the Consortium Director who shall arrange for a first meeting of the Board of Governors, and arrange subsequent meetings as required by them.

4. At the first meeting of the Board of Governors, there shall be elected a Chairman and a Vice-Chairman who shall hold office during the pleasure of the Board of Governors. In addition, such other business shall be conducted at the first meeting of the Board of Governors as the members shall, by majority vote, agree upon.

5. The board of Governors shall, in addition to any other business transacted by it at its first meeting, arrange for an annual organization meeting, at which time elections of a Chairman and Vice-Chairman shall take place and at which time such other business as may be agreed to by a majority of the members present and able to vote shall be agreed upon.

6. In the event the office of Chairman or Vice-Chairman shall at any time become vacant, an election shall be held to fill that position.

7. The Agent Board shall provide the services of a Secretary-Treasurer.

8. The Board of Governors shall have the following powers:

   a. Establish policy governing all matters relating to the effective and efficient delivery of distance education programs to persons served by the parties hereto who may be entitled to have access to distance education programs.

   b. Establish a Management Committee consisting of the following voting members:

      i. Chairman of the Board of Governors;

      ii. Three Superintendents or other designated central office personnel from member Boards, provided that no member Board shall have more than one of its Superintendents or other designated central office personnel appointed in order to prevent any inappropriate consolidation of decision making with one member. One of the three Superintendents may be the Agent Board Superintendent;

   and the following who shall be non-voting members:

      iii. the Director of the Consortium, who shall serve as Secretary;

iv. The Secretary-Treasurer or Assistant Secretary-Treasurer of the Agent Board who shall act as the Treasurer, who may, but shall not be required to, attend meetings and, if attending, shall attend in an advisory capacity only;

v. The Superintendent of the Agent Board, who shall attend meetings but in an advisory capacity only;

vi. A representative from Alberta Education, who shall attend in an advisory capacity only.

c. Review and recommend to the parties hereto the annual operating budget, prepared by the Consortium Director, with the limits of funds available through local assessment and government grants.

d. Do all such things as may be necessarily incidental to the achievement of the Consortium's primary objective of facilitating the effective and efficient delivery of distance education programs on behalf of the parties hereto.

e. Enter into agreements with other persons, agencies, or institutions for the provision of distance education services under terms and conditions agreed to by the Consortium Board of Governors.

f. Appointment of the Director of the Consortium, who shall also serve as Secretary to the Board of Governors.

9. The Management Committee shall do all such things as are reasonably required to be done by the Minister by each of the parties hereto in respect of distance education and shall do so on behalf of the parties hereto.

10. The Agent Board shall be established from time to time by resolution of the Board of Governors. The Agent Board shall, in all cases, act as the legal entity on behalf of the Consortium in entering into contracts and undertaking any other activities which require the involvement of a legal entity on behalf of the Consortium. Any parties contracting with the Agent Board will be ultimately responsible to the Agent Board. In carrying out the terms of its agency, the Agent Board agrees to act in accordance with the directions of the Management Committee and to act in the best interests of the Consortium and in accordance with the policy decisions of the Board of Governors.

11. Each of the parties hereto specifically delegates to the Agent Board authority to enter into contractual and other legal arrangements for the purpose of carrying out the objectives of the Consortium as identified in the policies of the Board of Governors, and in accordance with the directions of the Management Committee, and specifically indemnifies and saves the Agent Board harmless from any damages, suits, claims or causes of action that may arise as a result of the Agent Board carrying out its function as Agent Board except to the extent that the Agent Board may be liable for a pro rata share of any liability ultimately found to exist, with such pro rata share to be equal to the pro rata share of each of the other members of the Consortium.

12. In respect of all proceedings of both the Board of Governors and the Management Committee, a majority of the voting members shall constitute a quorum.

13. Notice of each subsequent meeting and related information shall be given by the Director of the Board of Governors in consultation with the Chairman of the Consortium to each member of the Board of Governors present and shall be given by ordinary mail not less than two (2) weeks in advance of the scheduled meeting to those members of the Board of Governors not present.

14. All matters to be dealt with by both the Board of Governors and the Management Committee shall be dealt with by vote by show of hands, with each vote to be determined by a majority of those present and able to vote, provided that those present constitute a quorum.

15. A member of either the Board of Governors or the Management Committee may resign by written notice to their respective School Jurisdiction, which notice shall be in writing and shall specify the date of resignation and the resignation shall be effective on that date. The Director of the Consortium Board shall be informed, in writing, of the replacement.

16. In the event of resignation of a member of the Board of Governors or the Management Committee, the party whose appointee has resigned shall, by resolution, appoint a successor and shall advise the Director of the Consortium who shall circulate a copy of that resolution to all members of the Consortium.

17. The Director of the Consortium shall be engaged by the Consortium through the Agent Board and shall perform those functions on behalf of the Consortium in ensuring that the members of the Consortium are informed of the business undertaken by the Consortium.

18. In the event that the Agent Board with whom any contract has been entered into or legal arrangement entered into ceases to act in its capacity as Agent Board, the substituted Agent Board shall do all such things as are necessary to have assigned to it or otherwise acquire the rights of the previous Agent Board in all such contracts or legal arrangements, and upon such assignment which may be a general assignment to the Agent Board giving up its status as Agent Board shall be released from all claims in respect of its having acted as an Agent Board, except to the extent that it will continue to have a pro rata share of liability along with all other members in the event that any liability is ultimately attached to or arising from the activities undertaken by it as Agent Board for the Consortium.

19. The Treasurer of the Consortium shall receive and record all revenue received from members of the Consortium and others and, upon approval of the Director of the Consortium, pay from these funds all obligations of the Consortium which have been committed as a result of the actions of the Management Committee or the Agent Board acting in accordance with the directions of the Management Committee, and shall in addition prepare an annual financial statement on or before October 30th of each year in such form as may be prescribed by the Minister of Education or, in the absence of such prescribed form, in accordance with generally accepted accounting principles governing the 12 preceding months ending the previous August 31st, and shall report to the Management Committee and the Board of Governors at such time and in such manner as either of those bodies deems advisable.

20. The Director shall ensure that accurate records are kept of the business transacted at each meeting of both the Board of Governors and the Management Committee; and shall further ensure that minutes and other relevant information are communicated in a timely fashion to each of the above bodies.

21. Each of the parties hereto agrees to contribute by the deadline agreed upon by the Consortium Board of Governors a portion of the annual budget for the Consortium Board of Governors, determined by the Consortium Board of Governors to be the amount contributed by that party. It is agreed that the amount be determined in two ways:

    a. An annual contribution per participating school to be paid on September 1st of each school year in an amount which will cover Consortium operating costs and expenses.

    b. The principle payment for services provided between jurisdictions within the Consortium is recognized and agreed upon.

    c. The Consortium shall pay 3% of its gross annual expenditures to the Agent Board for services rendered. Gross annual expenditures shall exclude course exchange fees.

22. In the event that any party hereto has failed to pay its portion of the annual budget or other amount as required, it will, after the deadline for such payment has passed, be disentitled from any vote and such sum unpaid will bear interest at the rate of eighteen (18%) percent per annum until fully paid.

23. By February 27 of each operating year, the Board of Governors shall determine the manner in which the Consortium will be financed for the next operating year. The Secretary-Treasurer of the Agent Board shall be notified of the decision as soon as is reasonably possible.

24. Any notice, report or other communication required or permitted by this agreement to be given or sent by one party to another shall be in writing and shall be adequately given if mailed by registered post to the party for whom it is intended at the following addresses:

Rocky Mountain School Division No. 15
P.O. Bag 8000
Rocky Mountain House, Alberta
TOM 1TO

The County of Wetaskiwin No. 10
P.O. Box 6960
Wetaskiwin, Alberta
T9A 2G5

Jasper School District No. 3063
P.O. Box 520
Jasper, Alberta
TOE 1EO

Yellowhead School District No. 12
3656 - 1st Avenue
Edson, Alberta
T7E 1S8

The County of Mountain View No. 17
P.O. Bag 100
Didsbury, Alberta
TOM OWO

The County of Lacombe No. 14
P.O. Box 1330
Lacombe, Alberta
T0C 1S0

Leduc Roman Catholic Separate
School District #132
5108 - 47th Street
Leduc, Alberta
T9E 6M4

Twin Rivers School Division No. 65
P.O. Box 7108
Drayton Valley, Alberta
T0E 0M0

Grande Cache School District No. 5258
P.O. Box 591
Grande Cache, Alberta
T0E 0Y0

and any notice so given shall be deemed to have been received by the party for whom it is intended on the third (3rd) business day following the date of mailing.

25. This agreement shall be in effect from the date shown above as being its effective date until such time as it is terminated in accordance with the provisions for termination hereinafter set out.

26. This agreement may be terminated by any party hereto giving to the Consortium Director notice of its intention to cease its participation in the Consortium. The Director shall then notify other Consortium members of this intent. This termination notice shall be given not later than March 31st of the year prior to the next operating year of the Consortium. The termination of this agreement by any one party in respect of its participation does not affect the ability of the remaining parties to carry on, and, further, in the event that a party decides to terminate in respect of its participation, any amounts owing by it to the Consortium Board of Governors shall not be extinguished and shall continue to be a just debt owing jointly by it to the other parties hereto and the Consortium Board of Governors.

27. The operating year of the Consortium shall be from September 1 to the next ensuing August 31.

28. Any proposed amendments to the Agreement shall be submitted in writing, by Notice of Motion. Any amendment should also be effected only as a result of a decision by a majority of two-thirds of the Consortium Board of Governors.

29. Other parties may be admitted to the Consortium upon such terms and conditions as the parties hereto may deem advisable and, in the event of admission of a further party, that party shall become a signatory to the then current Distance Education Consortium Agreement existing between the parties.

IN WITNESS WHEREOF the parties hereto have executed this Agreement effective the date first written above.

SIGNED, SEALED AND DELIVERED BY:

THE BOARD OF TRUSTEES OF:

ROCKY MOUNTAIN SCHOOL DIVISION NO. 15

____

____

- and -

THE COUNTY OF WETASKIWIN NO. 10

____

____

- and -

JASPER SCHOOL DISTRICT NO. 3063

- and -

YELLOWHEAD SCHOOL DIVISION NO. 12

- and -

THE COUNTY OF MOUNTAIN VIEW NO. 17

- and -

THE COUNTY OF LACOMBE NO. 14

- and -

LEDUC ROMAN CATHOLIC SEPARATE SCHOOL DISTRICT NO. 132

____

____

- and -

TWIN RIVERS SCHOOL DIVISION NO. 65

____

____

- and -

GRANDE CACHE SCHOOL DISTRICT NO. 5258

____

____

APPENDIX G

WEST CENTRAL ALBERTA CONSORTIUM HANDBOOK

WEST CENTRAL ALBERTA
DISTANCE EDUCATION
CONSORTIUM HANDBOOK

WEST CENTRAL ALBERTA DISTANCE EDUCATION CONSORTIUM
c/o David Thompson High School
R.R. #1
Condor, Alberta T0M 0P0
Phone: 729-2700   Fax: 729-3001

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INTRODUCTION

1. The Distance Learning Project has been developed by Alberta Education and is designed to meet the following purposes to:

   a. increase access and flexibility for small high schools in terms of the amount and type of programs that can be offered;

   b. improve the quality of course delivery and support services to distance learners. In terms of delivery, this is being done at the moment by utilizing the facsimile machine to ensure a quick turn-around of lessons. It is also projected that a greater use of technology such as data transfer, teleconferencing and eventually, Computer Managed Learning will take place;

   c. take out of the hands of the Alberta Correspondence School, the responsibility of marking student courses and put this task in the hands of teachers employed in or by our schools. These teachers will perform tutorial services designed to create a more effective learning environment at the local level;

   d. develop a regionalized system which will allow students to access specialized services not available in their home school;

   e. promote an organization system which will allow Consortium schools to share their teaching resources.

The West Central Alberta Distance Education Consortium was formed to promote the concept of Distance Education. To this end, Consortium schools are organizing to jointly promote this concept, and allowing students more flexibility and access to a greater variety of courses.

2. Definitions

a. Delivering School -	the school which is delivering the course to a student in another school
b. Receiving School -	the school which has the student who is having his lessons marked and who is receiving instruction from another school
c. Delivering Teacher -	the teacher who is marking and delivering instruction to a student in another school

3. Facsimile Machines

In order that the facsimile ('fax') machine be used in a manner which causes the least amount of frustration to all schools, and which is most economical, the following points should be followed:

a. Make sure that your machine has an adequate supply of toner at all times.

b. Make sure that your machine has an adequate supply of paper at all times.

c. Program the machine to send information after midnight when costs are lower.

d. It is probably better to have one person who is in charge of feeding the machine and delivering incoming information to the designated individuals.

4. Teleconferencing

It is doubtful if the Consortium will become involved in teleconferencing on a scale which requires multiple hookups, but it is suggested that teleconferencing be used for the time being in the following circumstances:

a. When a student or students requests verbal contact with their Distance Education teacher.

b. When the delivering teacher perceives a need to have verbal contact with a particular student or group of students.

c. If the Distance Education Representative feels that such contact is necessary.

If the circumstances occur, the Distance Education Representative should receive the request and make arrangements for the contact to be made.

5. Data Transfer

The Data Transfer/Teleconferencing system is now in place at the David Thompson, Niton Junction and Breton high schools and they are currently learning how to use the system. When the teachers involved become comfortable with this system, all schools will be informed when live teaching situations will occur. At that time, teachers will be encouraged to observe and evaluate the process.

The purchase of any additional systems is not recommended until we have completed an evaluation and determined the strengths and weaknesses of delivering courses in this way.

6. Responsibilities of the In-School Distance Education Representative

a. To outline the responsibilities of students involved in Distance Education courses.

b. To counsel students regarding the Distance Education course in which they are enrolled and provide the student with a copy of time lines for lesson submission.

c. To monitor and keep accurate records concerning the progress of Distance Education students and report, to their Principal, any laggard students.

d. To put in place, a report card system which advises parents of how their children are progressing.

e. To provide counselling to students having difficulties.

f. To monitor the school policy on student attendance in Distance Education classes.

g. To arrange for any student/teacher contact via teleconferencing or other technological means available.

h. To monitor the turnaround time for student lessons and make contact with the delivery school if the turnaround deadlines are not being met.

i. To arrange for times when unit and final examinations are to be written.

j. To ensure that all distance education technology is fully operational at all times.

k. To ensure that all information required by the Director is reported on time and on the required forms.

l. To co-ordinate the ordering of print and other materials as required by the delivering teacher, in consultation with the receiving school.

m. To keep the Principal informed concerning all aspects of the Distance Education program.

n. To forward Distance Education Course Registration forms to the Director.

o. To inform parents that their child is registered in a Distance Education course.

7. Responsibilities of Delivering Teacher

a. To ensure that the turnaround time for lessons and tests is forty-eight (48) hours. If there is any reason for delay, it should be reported to the Distance Education Representative.

b. To report to the Distance Education Representative any need for a direct student contact via teleconferencing or data transfer.

c. To provide students with a course outline and evaluation procedures for the course.

d. To provide students with a copy of the time frame for completion of the course.

e. To consult with the receiving school's Distance Education Representative regarding materials required for the course being delivered.

f. To attempt to make a personal telephone call to each of the students in the course.

8. Responsibilities of Principal

It is the responsibility of the Principal to see that an organization is developed and monitored to ensure the smooth and successful delivery of the Distance Education program.

9. Responsibilities of the Student

a. To observe the rules established by the school regarding Distance Education.

b. To stick rigidly to the time lines provided by the delivering teacher and report any problems in this regard.

c. To report any problems regarding course content to the Distance Education Representative.

d. To request contact with the delivering teacher, if they feel it is needed.

e. To report to the Distance Education Representative, any delays in turnaround time for the lessons submitted.

DISTANCE EDUCATION COURSES

STUDENT REGISTRATION FORM

SCHOOL NAME: ____________________

STUDENT NAME: ____________________ GRADE: ____________

COURSE ENROLLED IN: ____________________ NO. OF CREDITS: ______

SCHOOL DELIVERING THE COURSE: ____________________

ENROLLMENT DATE: ____________________

ESTIMATED DATE OF COMPLETION: ____________________

Please note that appeal procedures are different than those normally in effect in your school jurisdiction. Please the back of this form for the appeal procedure as it relates to final examinations.

STUDENT SIGNATURE: ____________________

PRINCIPAL OR REPRESENTATIVE SIGNATURE: ____________________

PLEASE FORWARD A COPY OF THIS REGISTRATION FORM TO:

Mr. Robert P. Smith, Director
WEST CENTRAL ALBERTA DISTANCE EDUCATION CONSORTIUM
c/o David Thompson High School
R.R. #1
Condor, Alberta
TOM OPO

The West Central Alberta Distance Education Consortium's policy for appealing final grade marks is as follows:

> "Any appeal of the final grade mark must be initiated, in writing, within fourteen (14) days of issuance of that mark. The order of appeal will be directed to:
>
> a. the delivering teacher;
> b. the Principal of the delivering school;
> c. the Superintendent of the delivering school jurisdiction
>
> and facilitated by the Principal of the receiving school."

COURSES RECEIVED VIA DISTANCE EDUCATION

SCHOOL NAME: ____________________

DATE: ____________________

The following is to be used for the form below. Use a for: Semester 1-(1); Semester 2-(2); Ten month-(3)

This form is to be filled out and forwarded to the Director of the West Central Alberta Distance Education Consortium by September 30, February 28 and June 23 of each school year.

Course in Place	# of Credits	Full # Accepted	School Course Rec'd From	1	2	3	# of Students Completed

COURSES DELIVERED VIA DISTANCE EDUCATION

SCHOOL NAME: ____________________

DATE: ____________________

The following is to be used for the form below. Use a for: Semester 1-(1); Semester 2-(2); Ten month-(3)

This form is to be filled out and forwarded to the Director of the West Central Alberta Distance Education Consortium by September 30, February 28 and June 23 of each school year.

Course in Place	# of Credits	Full # Accepted	School Course Delivered To	1	2	3	# of Students Completed

DUE DATES AND MARKS

NAME: ______________________________

SCHOOL: ____________ COURSE: ____________

Lesson # ______________________________

Due Date ______________________________

Date Rec'd ______________________________

Mark ______________________________

NAME: ______________________________

SCHOOL: ____________ COURSE: ____________

Lesson # ______________________________

Due Date ______________________________

Date Rec'd ______________________________

Mark ______________________________

NAME: ______________________________

SCHOOL: ____________ COURSE: ____________

Lesson # ______________________________

Due Date ______________________________

Date Rec'd ______________________________

Mark ______________________________

NAME: ______________________________

SCHOOL: ____________ COURSE: ____________

Lesson # ______________________________

Due Date ______________________________

Date Rec'd ______________________________

Mark ______________________________

SUGGESTED LETTER TO STUDENTS

(School Letterhead, if you like)

Date

Dear (student name):

Welcome to Distance Learning. I am sending you this letter to introduce myself. My name is (teacher name) and I am at (name of school). I will be your marker for this course.

The (name of course) course contains (# of) units and I encourage you to follow closely the time lines that have been set out for you. If you do, your chances of successful completion will be greater.

Evaluation for the course will consist of 60%, divided equally for your unit tests; and 40% for the final examination. You should also note that credits will not be awarded if your mark on the final examination is not 40% or above.

I would appreciate receiving a photograph of you so I have a better idea of who I am working with.

If you have any questions or problems with regard to your course, please let your Distance Education Representative know. This teacher will arrange a time for us to speak to one another.

Good luck with your course.

(teacher name)
(name of school)
(address)
(telephone and fax number)

POLICIES ON DISTANCE EDUCATION

COURSES

1. Students must complete a Distance Education Course in the time frame set by the delivering school. Failure to do so may result in work not being accepted as evidence of satisfactory completion of the course, and permission to write the final examination may be denied. Students may proceed at an accelerated pace providing they are meeting the standards set by their delivering teacher. An extension to the time frame set up by the delivering school is discouraged, but may be negotiated between the Principals involved.

2. Students will be allowed to write both unit and final examinations upon satisfactory completion of the unit or course, provided that the final examination is written within the time frame allocated for that course. Failure to write the final examination at the specified time will result in a failing grade, unless otherwise negotiated between the Principals and the student involved. The student will not be granted credits unless he/she receives 40% or above on the final examination. Should a student fail the course, he/she will be required to repeat the course.

3. All final marks should be returned to the schools in order that all administrative deadlines can be met.

4. Any appeal of the final grade mark must be initiated, in writing, within fourteen (14) days of issuance of that mark. The order of appeal will be directed to:

   a. the delivering teacher;

   b. the Principal of the delivering school;

   c. the Superintendent of the delivering school jurisdiction

   and facilitated by the Principal of the receiving school.

5. Final marks will be recorded to the nearest full percentage point and rounded according to Alberta Education and school jurisdiction policies.

6. A progress report will be mailed to the parent/guardian/independent student at appropriate times, and will include:

   a. the percentage average to that point;
   b. the percentage of the course completed;
   c. comments regarding progress.

7. The removal of a student from a Distance Education Course is the responsibility of the receiving school.

8. Course outlines and evaluation procedures will be provided to students at the commencement of the course by the delivering teacher.

9. The Final Examination for all Distance Education courses shall normally be weighted at 40% of the overall grade. The student will not be granted credits unless he/she receives 40% or above on the final examination. The following courses may be exempt from this regulation and treated according to their special nature in a manner determined by agreement between the delivering and receiving school administrators:

   a. Typing

   b. Practical Arts Courses

   c. Fine Arts

   d. Languages

   e. Courses from Institutes of Further Education

10. Permission to take a Distance Education Course must be obtained according to the procedure established in the receiving school.

Consortium Schools and Contacts

M A C C Alix School
Box 160
Alix, Alberta
T0C 0B0

Principal: Mr. Rod Butler
Representative: Mr. George Ruttan

Phone: 747-2778
Fax: 747-2012

Bentley School
Box 299
Bentley, Alberta
T0C 0J0

Principal: Mr. Ralph Scarlett
Representative: Mr. Bob Forsyth

Phone: 748-3770
Fax: 748-4300

Breton High School
Box 666
Breton, Alberta
T0C 0P0

Principal: Mr. Jim Musson
Representative: Ms. Penny Waldren

Phone: 696-3633
Fax: 696-3998

Caroline School
Box 147
Caroline, Alberta
T0M 0M0

Principal: Mr. Bob Jones
Representative: Mr. Murray Phillips

Phone: 722-3833
Fax: 722-3844

Christ the King School
75 Alton Drive
Leduc, Alberta
T9E 5K4

Principal: Mr. Joe Buysen
Representative: Ms. Lucia Chiarella

Phone: 986-6859
Fax: 986-8620

Cremona School
General Delivery
Cremona, Alberta
TOM ORO

Principal: Mr. Jim Gibbons
Representative: Ms. Penny Copping

Phone: 637-3856
Fax: 637-3830

David Thompson School
R.R. #1
Condor, Alberta
TOM OPO

Principal: Mr. Gerrit Nijenhuis
Representative: Mr. Gary Lawrenz

Phone: 729-3930
Fax: 729-3001

Eckville High School
Box 360
Eckville, Alberta
TOM 0X0

Principal: Mr. Ed Olson
Representative: Mr. Craig Taylor

Phone: 746-2236
Fax: 746-3285

Hugh Sutherland School
P.O. Box 430
Carstairs, Alberta
TOM ONO

Principal: Mr. Phil Corning
Representative: Mr. Jim Olsen

Phone: 337-3326
Fax: 337-3918

Jasper High School
General Delivery
Jasper, Alberta
TOE 1E0

Principal: Ms. Dale Karpluk
Representative: Ms. Dale Karpluk

Phone: 852-3316
Fax: 852-4019

Niton Central School
Box 10
Niton Junction, Alberta
T0E 1S0

Principal: Mr. Jim Froggatt
Representative: Mr. Jim Froggatt

Phone: 795-3782
Fax: 795-3933

Samson Alternate School
Box 658
Hobbema, Alberta
T0C 1N0

Principal: Ms. Lorraine Arnold
Representative: Mr. Mike McCulloch

Phone: 585-3793
Fax: 585-2226

Buck Mountain School
General Delivery
Winfield, Alberta
T0C 2X0

Principal: Mr. Ken Ladouceur
Representative: Mr. John Van Loenen

Phone: 682-3856
Fax: 682-3735

COURSES DELIVERED TO OTHER

CONSORTIUM SCHOOLS*

Alix	No Courses 1st Semester
Bentley	Math 23, 33
Breton	Biology 10, 30 Geography 20, 30 Personal Psychology 20
Caroline	Accounting 10 Building Construction 12 CALM 20 Health & P.D. 10 Mechanics 12 Occupations 10 Personal Living Skills 10
Carstairs	Accounting 10 Chemistry 10, 20 Math 30, 31, 33 Social 23
Cremona	Accounting 10, 20, 30 Art 10, 20 General Psychology 20 Law 20, 30 Spanish 10 Typing 10, 20
David Thompson School	Biology 10 Chemistry 20, 30 Drafting 10 English 13, 20 French 30 German 10, 20 Japanese 15 Math 20 Mechanics 12
David Thompson Tutor Marker	Accounting 10 Occupations 10 Record Keeping 10

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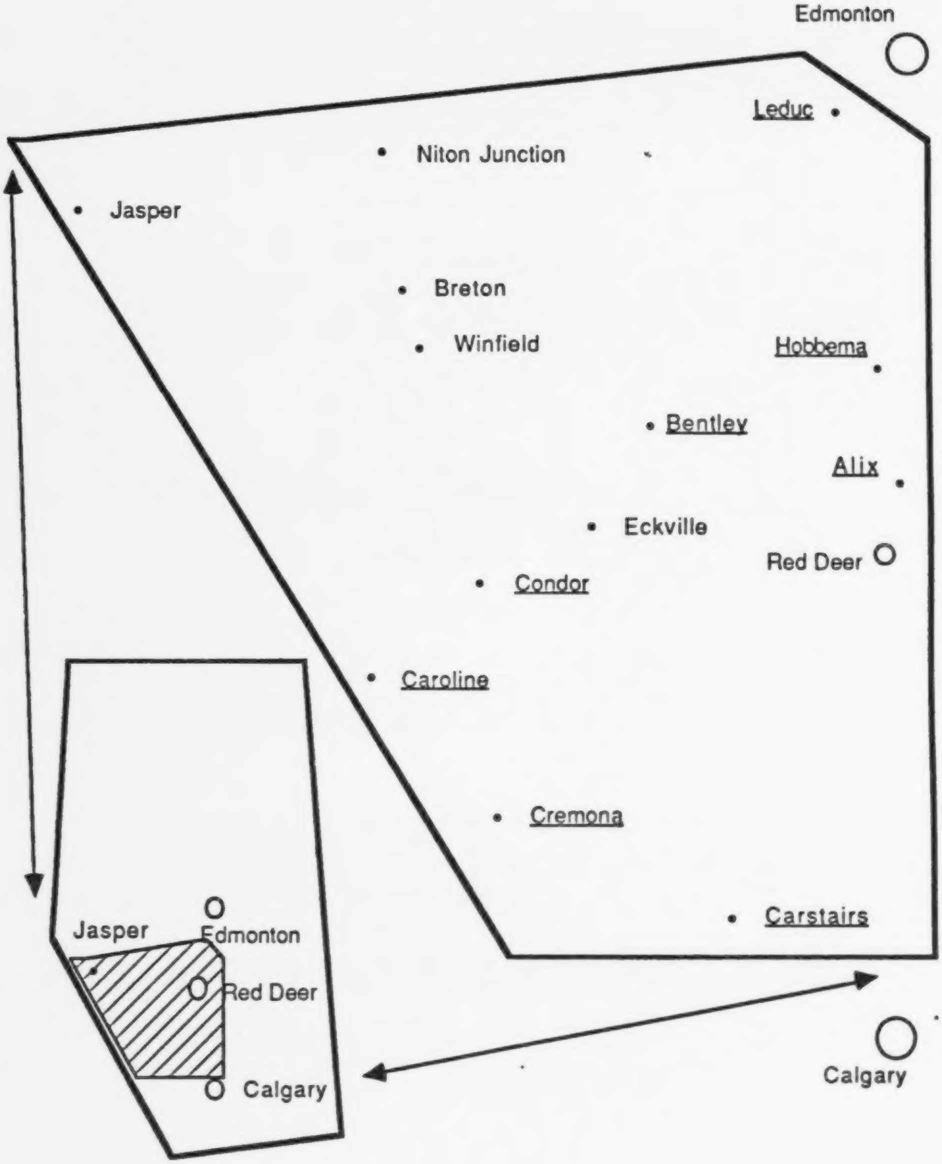
* Based on 1st Semester for 1990-91

Eckville	General Psychology 20 Science 14, 24
Hobbema	No Courses 1st Semester
Jasper	English 23 French 10, 20 Physics 30
Leduc	Math 30 Physics 10, 20
Niton Junction	Social Studies 20, 30
Winfield	Math 20, 31 Science 14

MAP OF CONSORTIUM AREA


Edmonton
Leduc
Niton Junction
Jasper
Breton
Winfield
Hobbema
Bentley
Alix
Eckville
Red Deer
Condor
Caroline
Cremona
Carstairs
Calgary
Jasper
Edmonton
Red Deer
Calgary